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ASTRONOMICAL OBSERVATIONS

from Lieut Gilli

MADE AT

U. S.

THE NAVAL OBSERVATORY, WASHINGTON,

UNDER ORDERS OF

THE HONORABLE SECRETARY OF THE NAVY,

DATED AUGUST 13, 1838.

James Melville

BY LIEUTENANT J. M. GILLISS, U. S. N.

PRINTED BY ORDER OF THE SENATE OF THE UNITED STATES.

3

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1846.

1862

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PREFACE.

The following pages are presented to the astronomical public with great deference; not that I presume to class them with even the least of the highly valuable contributions to science annually emanating from long-established observatories of the old world, but solely in the hope that they may add somewhat to the precision of our knowledge of the right ascensions and magnitudes of some of the smaller stars.

It will be perceived, in the "instructions," that their original purpose was, the benefit of the scientific expedition then on the eve of its departure from the United States, by affording corresponding culminations of the moon, to be used in determining differences of longitude with the stations which it might occupy during a long and perilous voyage among almost unknown islands.

With but little experience in the manipulation of fixed instruments; without a book relating to the subject in any manner, except "Pearson's Introduction" and "Vince's Astronomy," or an acquaintance in the astronomical world from whom suitable advice could be obtained, literal compliance with the directions of the Department was the only course to be pursued at the commencement of the observations. Indeed, as I had never seen a volume of the annals of European observatories, there could be no reason to suppose they did not embody every requisite to be complied with in recording observations; and it was not until the latter part of 1840 I became aware that the exact state of astronomical science demanded more than a simple record of the transits, after the errors of the instrument had been rectified. For information and counsel on this, as well as other important points, I most respectfully tender my thanks to Rev. Richard Sheepshanks, M. A., F. R. S., F. R. A. S , &c., and to S. C. Walker, M. A. P. S., &c., gentlemen whose devotion to and labors in the cause of astronomy have established for them most enviable fame.

Limited to the Nautical Almanac and the catalogues contained in the volumes mentioned, for observable objects, my attention was early arrested by discrepancies between the clock errors resulting from standard stars and some of those comprised in the list of moon culminations; discrepancies amounting in several cases to more than two seconds of time, which, being confirmed by the observations of consecutive nights, were consequently altogether beyond the limits of probable errors. Receiving about this time, through the kindness of Mr. William Simms, a copy of that vade mecum of astronomers, "the Catalogue of the Royal Astronomical Society," it occurred to me, that, whilst carrying out the objects of the exploring expedition, the mites which I could add to the data for more correctly locating "the landmarks of the universe" would not be entirely unworthy of collection; and, with this object in view, I determined henceforward to increase the number of stars to be nightly observed, so as to embrace one in each three and a half to four minutes, between the times of transit of the first and last moon-culminating star—the interval fixed on, being the time ordinarily occupied by the transit of one star over all the wires, and setting the finder for its successor. This was all I could hope to accomplish with the means in my power, unless careful estimations of the apparent magnitudes of each star observed should enable me to detect, at the termination of the series, variations in their brightness, or to confirm the degree of lustre already assigned to them. What has been accomplished in this respect is shown in the notes to the general catalogue.

All the observations of the volume, excluding a part of those of November 28th, 1838, and all of May 3d and 4th, 1841, (as stated in the foot-notes,) were made by myself. Absence on the latter days was caused by illness; and it is proper to state, that, with the above exceptions, there was not a visible culmination of the moon which occurred when the sun was less than one hour above the horizon, during the entire period embraced by the observations, or an occultation after the 15th June, 1839, except that of 139 *Tauri* mentioned on page 502, which I did not personally observe, although my residence till the middle of May, 1839, was two miles distant from the observatory. Earlier in the afternoon or later in the morning than just specified, the transit instrument would not show stars of the 2.3 magnitude, to which also is in part attributable the small number of observations of *Polaris* and *δ Ursæ Minoris*, many unsuccessful half hours having been passed gazing at the points they were known to be traversing.

Occupation during the day in attention to the duties originally allotted to the office, and the want of sufficient assistance, prevented any attempt at reduction of the constantly accumulating materials prior to the summer of 1843. The erection of the new observatory at that time requiring my constant care, on application to the Department, Prof. Bradford, U. S. N., was appointed to the task; and in September, 1845, finding that the preparation of the volume of magnetical and meteorological observations, made under the same orders, had occupied so much time, additional aid was asked for, and Lieut. William H. Ball, U. S. N., was detailed. Both gentlemen have labored with zeal and assiduity in the work.

It remains but for me to express my gratitude that the prosecution of these observations should have resulted in the foundation of a permanent naval observatory, and have obtained for me, though for a brief period, the privilege of association with many of the most distinguished astronomers of he present century.

J. M. GILLISS.

WASHINGTON, *July*, 1846.

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ERRATA.

Page.	Column.	For	Read
		h. *m.* *s.*	*h.* *m.* *s.*
3	6...........................	21 38 07.66	21 38 08.06
9	6...........................	7 15 44.21	7 15 45.21
13	5...........................	7 15 44.21	7 15 45.21
13	7...........................	7 15 38.737	7 15 39.737
14	5...........................	21 38 07.66	21 38 08.06
14	7...........................	21 38 04.864	21 38 05.264
14	Means......................	21 38 04.640	21 38 04.840
18	6...........................	7 15 38.737	7 15 39.737
18	8...........................	—0.675	+0.325
18	6...........................	21 38 04.640	21 38 04.840
18	8...........................	—0.602	—0.402
23	6...........................	4 41 06.34	4 41 06.88
31	6...........................	18 56 54.37	18 56 55.37
31	6...........................	20 10 44.74	20 10 54.74
40	5...........................	+38°48′	—38°48′
41	6...........................	15 21 15.23	15 21 14.23
63	7...........................	5 28 23.26	5 28 23.17
71	5...........................	3 31 23.60	3 31 23.55
71	7	3 31 19.487	3 31 19.437
95	5...........................	18 56 54.37	18 56 55.37
95	7...........................	18 56 52.203	18 56 53.203
189	6...........................	21 03 41.65	21 03 51.65
205	6...........................	3 224 6.20	3 22 45.20
232	5...........................	7 22 41.51	7 21 41.51
240	Means, magnitude 6 Virginis A..	5	6
257	Right ascension, 26 Scorpii ε	16*h.* 38*m.*	16*h.* 39*m.*
271	60 Aquilæ β^1, dele ^{1}.		
276	3 Piscis Aust.	21 03 41.65	21 03 51.65
276	3 Piscis Aust.	21 03 37.401	21 03 47.401
289	Occultation, χ Virginis.........	16 57	16 07
293	Declination, Canis Maj. D^1......	+0° 23′	—32° 29′
293	Annual variation, Canis Maj. D^1.	+3*s*.077	+2*s*.221
299	No. 454	16 15 51.502	16 15 51.751
299	No. 454	—338	—751
302	No. 623	21 03 37.401	21 03 47.401
304	No. 708	27 Piscium	28 Piscium
427	Right ascension, 32 Sextantis....	10*h.* 23*m.*	10*h.* 24*m.*
487	Right ascension, 32 Sextantis....	10 23	10 24
578	76 Draconis, Cor. for prec., &c. ..	—5.844	—11.742
	Mean AR	20 53 30.754	20 53 36.652
590	No. 422	20 53 30.754	20 53 36.652
	Diff. AR, A. S. C.	—9.896	—3.998
656	In part, the right ascension of 45 Pegasi is 22*h.* 37*m.* 51*s*.687 ; it should be 22*h.* 37*m.* 41*s*.479.		

INTRODUCTION.

The observations comprised in the succeeding pages were originally commenced for the purpose of determining differences of longitude with the stations which might be occupied by the expedition then about to depart on a voyage of exploration and discovery by direction of the Government of the United States, and in consequence of the following order from the honorable Secretary of the Navy:

NAVY DEPARTMENT, *August* 13, 1838.

SIR: Mr. Bond, of Boston, has been employed to make a series of observations during the absence of the exploring expedition, and in connexion with it. It is deemed proper that similar observations be made at the Depôt of Charts and Instruments. You are therefore charged with the performance of this duty; and, in conducting the same, you will be governed by the enclosed, which is a copy of the instructions sent to Mr. Bond.

I am, respectfully, &c.,
J. K. PAULDING.

Lieut. J. M. GILLISS, *Depôt of Charts, &c., Washington.*

That portion of the instructions which relates to the subject matter contained herein is as follows; an entire copy having been published in the volume "Magnetical and Meteorological Observations," made in compliance with the same order:

Instructions, &c., to be observed in making the series of observations during the absence of the exploring expedition, and in connexion with it.

1st. You will use every opportunity of taking observations of moon-culminating stars, confining yourself principally to those enumerated in the Nautical Almanac, to be observed at Greenwich. As most of these stars are of the fifth and sixth magnitude, you will, when opportunity offers, observe all those of the first and second magnitude, particularly during the day, if any such offer.

2d. Although you will have a *meridian mark* to refer to, I should prefer your having recourse to observations of *high and low* stars to prove your observations, as the journal of your observations will then show for itself the state of your instrument.

3d. I would *desire* that your observations should be registered by a sidereal clock, in order to avoid any reduction for *time* equivalents, as mistakes are liable to creep in the long series of observations you will be engaged in. If, at any time, you should not be able to make use of a sidereal clock, your observations ought, in all cases, to be corrected before the expiration of *twelve hours*, and marked in the column with its proper sign of application.

4th. Your transit ought to be kept as nearly as possible in the meridian; although it is not absolutely requisite that it should be precisely so for the observations of the moon-culminating stars, yet it is so for the moon herself.

5th. You will lose no opportunity of making observations on any astronomical phenomenon, describing the place in the heavens of its occurrence. I mean that your attention may be particularly restricted to any falling stars, particularly to those periodic ones in November.*

---

* See "Magnetical and Meteorological Observations at Washington," pages 532—534.

6th. All eclipses you will of course be particular in observing, in order, if any remarkable phenomenon should happen, we may have simultaneous observations on it. The power of your telescope need not be over 240, and generally of 175 and 75; the lower power will be most suitable, as affording a clearer and flatter field. In noting any observations, you will be particular in mentioning the instrument and power used.

* * * * * * * * * * * *

11th. The eclipses of Jupiter's satellites frequently offer; they will be generally observed by me, and I think had better claim some attention from you; if not as respects themselves, they may lead to observations that might be interesting, if not useful. Also, I would direct your attention somewhat to the occultations of all large stars, and the difference of observations as respects the disappearance and reappearance of the star with the moon's limb. All these kind of observations will be most desirable during the year 1840.

* * * * * * * * * * * *

Respectfully, &c.,
CHARLES WILKES.

THE OBSERVATORY.

A small frame building, to be used as an astronomical observatory for the Depôt of Charts and Instruments, was erected by Lieutenant Wilkes on Capitol hill, some time during the years 1833–'34. Its location was 1,200 feet (nearly) N. 5° W. from the centre of the Capitol, on the brow of an eminence sloping rapidly to the north and west, and commanding unobstructed views of the range of hills which bounded the horizon in those directions. Vision to the south and east, however, was intercepted at a short distance, the parapet of the building just mentioned rising about 7° above the south horizontal line of the transit instrument.

Its approximate latitude is found by the following observations to be 38° 53' 32".8 N., those of 1840 having been made with the vertical circle to the declinometer, and those of 1841 with a 10-inch Reichenbach circle, both instruments adjusted in the meridian, except in the case of *Polaris.*

Observations for latitude.

Date.	Star.	Sidereal time of observation.	Observed zen. dist.	Barom.	Ther.	Bessel's refractions.	Latitude.
1840.		*h. m. s.*	° ″ ′	*Inches.*	°	″	° ′ ″
July 26	ε Ursæ Min.	17 02 38	43 22 50	30.250	75.0	52.8	38 53 43.9
26	α Herculis	17 07 24	24 18 30			25.2	33.2
27	δ Ursæ Min.	18 24 00	47 40 55	30.210	76.0	61.2	43.9
27	Polaris	18 46 46	51 12 35			69.2	27.9
27	Polaris	18 49 06	51 11 50			69.2	24.6
27	ζ Aquilæ	18 58 06	25 15 15			26.2	36.5
1841.							
Aug. 16	β Draconis	17 26 53	13 31 45	30.126	73.0	13.4	28.1
16	γ Draconis	17 52 57	12 37 00			12.5	33.6
16	μ^1 Sagittarii	18 01 19	59 57 35			96.4	33.3
16	δ Ursæ Min.	18 23 34	47 41 15			61.3	24.8
16	α Lyræ	18 31 36	0 14 52			0.3	22.3
16	β Lyræ	18 44 16	5 42 30			5.6	41.8
	Mean latitude	....	....	......	....	......	38 53 32.8

The longitude adopted for the observatory by Lieut. Wilkes was 5*h.* 08*m.* 08*s.*0 west of Greenwich, but a reduction of the moon culminations and occultations observed having been commenced by Mr. S. C. Walker, for the use of the *United States coast survey*, under the direction of its distinguished superintendent, A. D. Bache, Esq., the following partial results have been promptly communicated. For this and other important information, imparted during the past six years, I gratefully acknowledge indebtedness to Professor Bache.

Observations for longitude.

Date.	Object and phase.	Compared with	Easting.	Reduction to Greenwich.	Longitude from Greenwich.
			h. m. s.	*h. m. s.*	*h. m. s.*
1838, Sept. 18	Beginning of eclipse	Philadelphia	7 21.7	5 00 40.6	5 08 02.3
	Beginning of eclipse	Dorchester, (Mass.)	23 39.6	4 44 17.0	7 56.6
	Beginning of ring	Philadelphia	7 20.4		8 01.0
	Ending of ring	Philadelphia	7 19.0		7 59.6
	End of eclipse	Philadelphia	7 18.1		7 58.7
	Mean by *one* solar eclipse	....	....	....	5 07 59 6
1839, June 20	i Virginis Im.d.l.	Philadelphia	7 24.4		8 05.0
20	“ “	Dorchester	23 45.0		02.0
23	b Scorpii Im.d.l.	Mer. obs'ns Green.			08.6
July 6	η Tauri Im.b.l.	Philadelphia	7 25.2		05.8
6	“ “	Mer. obs'ns Green.			08.7
Oct. 17	δ Capricorni Im.d.l.	Philadelphia	7 25.8		06.4
1840, May 6	μ^1 Cancri Im.d.l	Philadelphia	7 26.5		07.1
6	“ “	Mer. obs'ns Green.			05.9
July 10	τ Scorpii Im.d l.	Cambridge, (Mass.)	23 38.4	4 44 28.7	07.1
Oct. 6	d^3 Capricorni Im d.l.	Philadelphia	7 24.7		05.3
6	“ “	Boston	23 47.2	4 44 16.1	03.3
Nov. 2	ι Capricorni Im.d.l.	Philadelphia	7 23.4		04.0
2	“ “	Cambridge	23 37.4		06.1
2	“ “	Boston	23 50.1		06.2
	Mean by *eight* Immersions	....	....	....	5 08 05.8
1839, July 6	b Pleiadum Em.d.l.	Philadelphia	7 26.2		5 08 06.8
6	“ “	Mer. obs'ns Green.			05.5
6	c Pleiadum Em.d.l.	Mer. obs'ns Green.			07 59.6
Sept. 26	b Pleiadum Em.d.l.	Philadelphia	7 22.9		08 03.5
26	“ “	Boston	23 45.8		01.9
26	“ “	Mer. obs'ns Green.			03.5
26	g Pleiadum Em.d.l.	Philadelphia	7 25.1		05.7
26	“ “	Boston	23 47.8		03.9
26	“ “	Ashurst, (Eng.)	5 06 50.8	1 10.1	00.9
26	“ “	Greenwich			00.9
26	“ “	Mer. obs'ns Green.			04.1
26	e Pleiadum “	Philadelphia	7 25.0		05.6
26	“ “	Boston	23 49.7		05.8
26	“ “	Ashurst	5 06 53.7		03.8
26	“ “	Greenwich			01.3
26	“ “	Mer. obs'ns Green.			03.3
26	c Pleiadum “	Philadelphia	7 23.0		03.6
26	“ “	Ashurst	5 06 49.2		7 59.3
26	“ “	Greenwich			8 08.5
26	“ “	Mer. obs'ns Green.			7 58.9
1840, Jan. 20	α Leonis “	Mer. obs'ns Green.			8 07.5
April 19	τ Scorpii “	Philadelphia	7 22.9		03.5
19	“ “	Mer. obs'ns Green.			04.1

Observations for longitude—Continued.

Date.	Object and phase.	Compared with	Easting.	Reduction to Greenwich.	Longitude from Greenwich.
			h. m. s.	h. m. s.	h. m. s.
1840, Oct. 13	η Tauri	Philadelphia	7 23.7		5 08 04.3
13	"	Cambridge	23 41.7		10.4
13	"	Boston	23 52.4		08.5
13	"	Mer. obs'ns Green.			00.9
Dec. 14	q Leonis	Mer. obs'ns Green.			13.0
1841, Sept. 6	c Pleiadum	Philadelphia	7 23.4		04.0
6	"	Mer. obs'ns Green.			00.9
6	e Pleiadum	Philadelphia	7 22.5		03.1
6	"	Mer. obs'ns Green.			00.2
6	l Pleiadum	Mer. obs'ns Green.			10.3
	Mean by *thirteen*	Emersions.......	....	....	5 08 04.2
1841, April 19	Meteor A	Philadelphia	7 22.9		5 08 03.5
19	Meteor B	Philadelphia	7 23.4		04.0
	Mean by vanishing of *two* meteors ..		....	....	5 08 03.8

Whence the longitude of the observatory west of the meridian of Greenwich is—

	Relative weight.	Longitude.
		h. m. s.
By solar eclipse	1	5 07 59.6
By 8 immersions of stars	8	8 05.8
By 13 emersions of stars	8	8 04.2
By 2 vanishings of meteors	1	8 03.8
Mean according to weights	18	5 08 04.6

The length of the observatory, east and west, was fourteen, its breadth thirteen, and height from the floor to the eaves, inside the plastering, ten feet—its roof sloping to the north and south at the usual inclination in buildings covered with wood.

Meridian doors, each nearly two feet wide, and making, together, an aperture more than three and a half feet, reached from the floor to the eaves; they opened outwardly, and were lined inside with baize. The roof doors were of the same width, but extended only to within three feet of the ridge pole. These were raised by pulleys leading over uprights on the roof, through sheaves in the east and west sides of the building. There was a door of ordinary dimensions in each of these sides; and to prevent the transmission of terrestrial vibrations, the building was surrounded by a ditch five feet wide and deep.

It will be perceived that there was a zone of the heavens 13° wide, on each side of the zenith, (from 26° to 53° north declination,) altogether invisible, from the locality of the transit instrument, which, including a part of the moon's path, interfered with the main object of the contemplated observations; and the experience of one winter proved that the wide meridian apertures were totally unsuited to the climate, from the prevalence of high winds during a large part of the time. It was essential to remedy these defects; therefore, in September, 1838, so much of the roof was cut away to the south of the zenith as permitted the observation of stars whose declination was less than 31½° north; and in the spring of 1839 alterations were made in the vertical doors, so that the whole, or an opening only 12 inches wide, could be used at pleasure. The latter was found best adapted, except on an occasional perfectly calm night in summer. The two sides of the observatory being held together solely by the part of the roof about the zenith, a corresponding change to the north would have rendered it insecure; indeed, it was found necessary to supply the strength lost by the excision already made, by transverse bars of iron, firmly screwed above the head of the roof door. Nearly one-seventh (twelve out of eighty-eight) of the standard stars of the Nautical Almanac, and to us the most important stars, were still entirely concealed.

Massive piers of dressed granite, for the support of the principal transit instrument, occupied the central part of the building, being embedded in solid masonry. They were ten feet long, fourteen inches square at the top, by eighteen at the floor line, and had their inner faces vertical, with an elevation above the floor of six and a half feet. From this, they were entirely detached. In addition to these, to each of the four doors there was a cylindrical marble pier, ten inches in diameter, and surmounted by a broad stone cap, for stands to portable instruments. They were likewise set in masonry, with a height about three and a half feet above the floor.

THE TRANSIT INSTRUMENT.

This instrument (*see plate*) was constructed by Troughton for the United States coast survey, under the direction of Mr. Hassler, in 1815, and was loaned to the Navy Department on application of Lieut. Wilkes.

The object glass has a clear aperture of 3*in*.75, with a focal length 63 inches, and was doubtless one of the best made instruments of that day. Its axis is formed by two truncated cones of cast brass, firmly screwed, in diametrically opposite directions, into a spherical zone of the same metal. The cones terminate in bell metal pivots 0*in*.9 long, with a diameter equal to their length, making the entire length of the axis a little less than 35 inches. At a distance of three and a half inches from each of the pivots has been cast a circle, 3*in*.5 in diameter, and half an inch broad on the edge, whose form has been perfected in a lathe.

The telescope is composed of two cylinders (*A A'*) of stout sheet brass, brazed together and screwed in like manner as the cones of the axis into the same zone, and two shorter cylinders, (*a a'*,) each smaller than the other, which forms the eye end. For the rectification of the optical axis, the small cylinder *a* is movable in azimuth by screws *c c'* passing through the larger one *A'*. On the completion of this adjustment, the two are secured together by four smaller capstan-head screws that pass through oblong holes in the perforated cap, and into an inner parallel plate thereto belonging to the cylinder *a*. Three of these screws are shown in the plate. It is also necessary that they should be loosed before attempting to adjust the line of collimation. To the smallest cylinder *a'*, and nearer the eye, is attached on each side a semicircle of brass 5*in*.5 in diameter, divided on inlaid bands of silver, and reading to minutes of arc by verniers to movable radii, fitted with spirit levels. The zeros (0°) of these finder semicircles are made to coincide with the line of collimation in altitude of the telescope by the screws *z z'*, and, the divisions proceeding each way, the angle set off is equal to the zenith distance of the body intended to be observed.

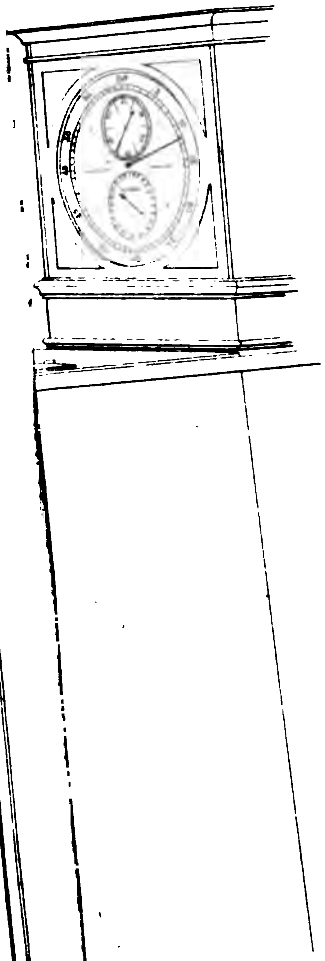
At the principal focus, and in a plane perpendicular to the optical axis, there are five vertical and one horizontal lines, whose illumination at night is effected by light through one of the pivots and a pierced reflector placed diagonally, at the junction of the tubes and axis. For its modification, a rack-screw which controlled the size of the aperture opposite the hollow pivot, was movable by the milled head L, placed within reach of the hand; but the pinion had been thrown out of the rack before the instrument came under my charge, and could not be restored without unscrewing the axis, which I was unwilling to attempt. To avoid parallax in viewing the wires at oblique angles, the eye piece moves in a dovetailed slide parallel thereto, and during observation is placed perpendicular to each one successively.

Firmly secured to the tops of the piers by screws and plugs cemented in cavities with gypsum, are plates of brass 6*in*.5 square and half an inch thick, with dovetailed grooves in their centres, into which slide the brass Y's that immediately support the instrument. The height of these Y's is three inches, and their thickness one inch; there being semicircular cavities beneath the rectangular incisions, whose curves may be affected by strong capstan-head screws that rest on the plates, and force the arch upward when turned. As the spring of the metallic arch is the only adjustment for inclination of the axis or level, it is indispensable that almost absolute horizontality of the summits of the piers should be established, prior to mounting the transit. Motion of the Y's in the grooves is resisted by a spring pressing in an opposite direction to the action of the screws, and rendering it uniform. Both, are adjustible in altitude and azimuth.

Attached to the inner faces of the piers in similar manner to the preceding, are plates 6*in*.5 long by 3*in*.5 wide, supporting cylinders 1*in*.0 in diameter and 6*in*.0 long, that contain springs with *friction rollers* at their upper extremities, of the same dimensions as the circles cast on the axis. The former press upward by the springs against the latter, and relieve a great portion of the weight from the pivots and Y's, thus acting the part of counterpoises. There are screws at the bottom of the cylinders, by which the upward force of the springs may be diminished, should the whole tension be too great.

As made by Troughton, the level was hung beneath the axis during the inclination adjustment; but an injury which one of its arms had received compelled its alteration into a rider. To accommodate changes in the length of its bubble with variations of temperature, it was fitted with movable ivory scales, divided into thirty equal parts, whose zeros were adjustible to marks ground in the glass tube; and a short transverse level insured readings in the same vertical plane. The value of one division of its scale was found by a mean of many measurements to be 1''.027, which quantity has been adopted as correct, on the few occasions when an appreciable inclination has been permitted.

To cut off side light and counterpoise the finder circles, a shade remained permanently on the object end of the telescope; and for examining near terrestrial objects, (as the south meridian mark,) a disc, with a circular aperture 0*in*.9 in diameter, accompanies the instrument, which may be fitted into this shade.



Three eye pieces came into my possession with it, whose magnifying powers were measured with a Ramsden's double-image dynameter, and found to be 53.5, 81.7, and 131.0. In these determinations, forty measures were made with each eye piece, using discs with apertures 2*in*.4, 2*in*.0, 1*in*.7, and 0*in*.9, and changing them after each ten results. A fourth eye piece was added by Mr. Hassler, whose power was near 180 times; that used throughout the observations magnified 81.7 times.

CLOCK.

A sidereal clock was ordered for the observatory by Lieut. Wilkes, and a case made and put up for it during the winter of 1836–'37. In accordance with his directions, it was fitted to the western transit pier, against which it was firmly held by the iron bands, screws, and nuts, one of which (at the top of the pier) is seen in the plate; the other was near the floor. It faced east, or towards the observer, by whom the seconds hand was distinctly visible except when observing about the zenith. The clock appears to have been mounted about the 1st July following; gave much trouble and vexation, from utterly irregular going, and was finally taken down in August, 1839.

The preceding were the only fixed instruments belonging to the observatory when I took charge of it. Of a portable character, it numbered several that had been made for an exploring expedition contemplated by the United States Government in 1828; a Borda's circle presented by Troughton to Mr. Hassler in 1815; a three-and-a-half feet achromatic telescope by Jones, mounted on a pillar-and-claw stand, and a portable transit instrument made by Richard Patten for Lieut. Goldsborough, which I subsequently mounted for the use of the assistants on the pier near the south door.

Judging of the labors required of the superintendent of the depôt prior to the receipt of the orders and instructions heretofore cited, from the records of the office, the transit instrument appears to have been mainly employed in observing the sun, to determine the errors of the clock with which the navy chronometers were daily compared, and to this end, the time was noted by one of the many chronometers under rate. Observations by night were rare; and eclipses, occultations, or other astronomical phenomena, except that of the sun in 1836, seem to have received little attention. The additional duties imposed by the orders absolutely required a suitable timekeeper and a new telescope, to be parallactically mounted, and permission was granted me to import a sidereal chronometer and a forty-two-inches achromatic. As the observations progressed in the next three years, the want of good clocks and a proper circle, the irremediable defects of construction in the transit instrument, and, finally, the unfitness of the building itself* for astronomical purposes, became apparent, and, as they were successively presented, the Department was pleased to exhibit its confidence in my views by permitting me to order two clocks from Parkinson & Frodsham—one sidereal, the other mean time; a meridian circle from Ertel & Son;† and, as the crowning result, recommended the erection of a permanent establishment. Thus originated the naval observatory.

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* On two occasions the vertical meridian doors were actually blown to a distance of several feet from the building, leaving the instruments almost out doors.

† Now erected at the new observatory.

From the dismounting of the clock on the 25th August, 1839, till the 5th December following, a two-days marine chronometer was necessarily used in noting the transits; thence to the 15th July, 1841, an excellent eight-days sidereal chronometer, made expressly for the observatory by Parkinson & Frodsham, with a distinctly marked extra sized seconds dial and an audible half seconds beat. The order to these gentlemen for clocks stipulated only that the instruments should be the best which the advanced science of horology would enable them to construct, and the loudest beat permissible, without detracting from the more important consideration—uniformity. About eighteen months were spent in their fabrication and trial. On their arrival, they were unpacked and put up by Mr. Arthur Stewart, of New York, a gentleman of much professional intelligence and ability, and who obligingly came to Washington for the purpose. The sidereal clock was fitted to the same place as the previous one.

Both instruments are alike in construction, having Graham's dead-beat escapement, with jewelled pallets, and mercurial compensation pendulums, with cylinders of glass for reservoirs. They have screw adjustments for putting them in beat; the usual means for altering the length of the rods; and divided scales, secured inside to the backs of the cases, by which, with an index attached to the base of the stirrup that supports the cylinder, the arc of vibration is indicated. A considerable decrease of this arc within a few days was observable in the sidereal clock; after which, it remained uniform; but the mean-time clock scarcely varied its arc throughout the year it was mounted on Capitol hill. ***Both constantly lost on their rates;*** the pendulums continually requiring to be shortened, to prevent the accumulation of inconveniently large errors. This remarkable tendency excepted, their going was highly satisfactory. They were always wound on Sunday.

THE TELESCOPE.

As already mentioned, the portable telescope was an achromatic of 42 inches focal length, and an object glass 3¼ inches in diameter. It was made for the observatory by Mr. William Simms, and reached its destination in June, 1839. A misunderstanding of the agent through whom it was imported caused it to be made with vertical and horizontal motions only, rendering it necessary to change the mounting after its arrival. This was effected, under my direction, by Mr. Patten, in this city, agreeable to the plan described in vol. II., page 43, of "Pearson's Introduction to Practical Astronomy," where the instrument is so thoroughly described that no farther account need be made of it here.

ADJUSTMENTS OF THE TRANSIT INSTRUMENT.

The level error.

There is probably no part of the transit instrument whose construction is worthy of imitation except its Y's, which, possessing but the slight range in altitude permissible by the spring of the stout brazen arches, remain almost absolutely in the same horizontal plane for long intervals, and enables the observer to effect quick and precise adjustment in level, not attainable in the ordinary form. Deeming it important, in the earlier period of the observations, to correct all instrumental errors, every *fifth day* during the years 1838 and 1839 was fixed on for their rectification, the apparent necessity of the prior adjustment in level being not a little increased by my ignorance of the level divisions. When the form of the instrument was changed, und it became a "*rider*," its scale was examined on a bubble-trier of Mr. Hassler's, and the mean of ten measures of 330 single divisions gave for the value of each one

$$1 \text{ div.} = 1''.027 = 0^s.068,$$

as previously stated, and which amount has been used in the reductions.

Throughout the year 1840, *the inclination of the axis to the horizon was corrected on the day of observation.*

In 1841, the positively injurious effects of frequent adjustments, by rendering the screws less stable, became evident, and it was determined to touch them rarely, leaving the corrections to individual observations to be computed. The ascertained inclination was then recorded in the rough transit book on the first page of the day's observations, whence they have been transcribed, as a part of the foot notes to the following pages. They are as follows; premising that the values given result from at least six readings in each position of the level, and — signifies that the eastern pivot of the axis is highest:

Table of level errors.

Date.	Inclination.	Date.	Inclination.
	s.		s.
1841, August 31	—0.10	1842, June 26	—0.38
1842, March 27	—0.40	27	—0.78
28	—0.40	29	—0.70
29	—0.64	30	—0.70
June 21	—0.61		

The angular value of the inclination of the axis to the horizon being expressed by an arc of the prime vertical, intercepted between the plane of the meridian and that described by the transit instrument in its revolution, the correction to be applied to any star on account of this error will of course be,

$$\text{Correction} = I \cos. (\pi - \lambda) \text{ cosec. } \pi \text{..........I},$$

in which I represents the half difference of readings of the level in two positions, π the polar distance of the star, and λ the co-latitude of the observatory, 51° 06′ 27″; the result thus obtained being *subtractive* from the observed *upper* transits when the eastern pivot is highest.

The collimation error.

A meridian mark placed on the parapet to the Capitol by Lieut. Wilkes was exclusively used in the earlier period of the observations for correcting the line of collimation of the transit instrument. The distance of this mark was 1,200 feet, (nearly ;) and, in order that itmight be seen distinctly, the aperture of the object glass was diminished to 0*in*.9, and the adjustment effected either early in the morning or just before sunset in the afternoon.

The method of proceeding was to bring the middle wire of the system to accurate bisection of the mark, with the azimuth screw; then lift the transit from the Y's *by hand*, and reverse it; if the mark continued bisected, the optical axis was truly perpendicular to that of rotation; otherwise, the deviation was estimated; the diaphragm containing the wires moved through one-half the differing interval by the collimating screws, and the axis through the other half by the azimuth screw. Should not this trial have proved successful on restoration of the instrument to its first position, the experiment was repeated until the error was destroyed.

The position of the finder circles below the collimating screws rendered this adjustment of the instrument extremely unstable, it being difficult to set off a zenith distance without exerting some lateral pressure of the eye end. To obviate this as much as possible, the circles were used alternately, and the utmost precaution exercised, to prevent increase of error during observation. This defective construction compelling constant examinations by reversal, which the slight materials of the telescope tube were badly qualified to sustain uninjured, I found it necessary to erect a second mark to the north of the observatory, by which I would be able to ascertain the deviation (collimation error) without removing the transit from the Y's. A massy obelisk of sandstone, 18 feet high, and 14 inches square at top, was therefore built at the distance of 2,302 yards, and on its south face, near the top, five black lines were painted, whose measured distances apart were three inches; the first mark to the east of the centre being in the same vertical plane as the middle wire of the transit and the mark put up by Lieut. Wilkes, when the line of collimation was exactly adjusted.

After the erection of the obelisk, the transit was rarely raised from its Y's; the plan adopted being to bring the central wire on the south mark, as before; then turn it upon the obelisk, and estimate the deviation from the mark, mentioned at the close of the preceding paragraph. The distance of the new marks enabled me to use the full aperture of the object glass; and the arc value of any two contiguous ones being 7″.48 = 0s.50 nearly, the error of collimation could be readily ascertained to the 0s.05; nearer it was not certainly known.

The errors determined in this manner, like those of level, have been inserted in the foot notes to the respective days. They are as follows:

Table of collimation errors.

Date.	Collimation.	Date.	Collimation
	s.		s.
1841, April 19	+0.44	1842, Jan. 24	+0.68
27	—0.40	Feb. 27	+0.39
May 6	+0.50	Mar. 20	+6.00
15	+0.30	27	—0.21
16	+0.32	28	+0.50
June 30	+1.00	29	+0.78
July 1	+1.00	31	+0.44
10	+0.88	June 19	—0.40
15	+0.56	29	—0.80
Oct. 6	+0.20	30	—0.55
Nov. 4	+0.45		
5	+0.45		

If a line drawn from the optical centre of the object glass to the middle wire of the telescope be inclined towards one of the pivots, a small circle is evidently described by its revolution on the axis, which is every where equally distant from the meridian; whence, if we represent the angular value of this inclination by r, + when eastward, — when westward of the meridian, and the polar distance of a star by π, the correction to be applied to the observed transit of that star for the error of collimation will be

$$\text{Correction} = r \text{ cosec. } \pi \ldots\ldots\ldots\ldots \text{II},$$

and the sign of the correction will be changed only at the lower culmination of the objects observed.

The meridian error.

The preceding adjustments having been perfected, a vertical plane is described by the line of collimation during a rotation of the transit instru- on its axis, which may coincide with the meridian throughout, but necessarily intersects it only at the zenith and nadir, its inclination to the plane of the meridian being a maximum at the horizon, 0 at those points.

If the apparent right ascensions and declinations of certain observed stars be well known, the observations afford means to determine the existence of any inclination of these planes, since, if they be identical, and the clock have no error, the observed and tabulated right ascensions must agree, however distant the stars may be from the zenith, or the clock errors should be alike when one exists; otherwise, if they form an angle with each other, differences will be detected whose amounts will vary as the sines of the respective zenith distances of the stars multiplied by the angle of inclination measured on the horizon. Let us call α and α' and π π' the apparent right ascensions and polar distances of two stars, t and t' the observed times of transit of the same stars corrected for clock rate in the interval, and ϕ the latitude of the observatory, then the angular value of this inclination in time will be

$$\Delta = \left((\alpha - \alpha') - (t - t') \right) \text{sin. } \pi \text{ sin. } \pi' \text{ cosec. } (\pi \pm \pi') \text{ sec. } \phi$$

This is the method designated in *the instructions*, and which has been uniformly followed in determining the meridian errors. Care has, however, been taken to select from the observations at least two pairs of stars best known, differing most from each other in declination and least in right ascension, giving precedence in all cases to those contained in the list of 100 stars found in the Nautical Almanac.

The adopted meridian errors for the days of observation are the arithmetical means of the several pairs, and are embraced in the following tables:

Tables of azimuth errors.

1838.

Date.		Azimuth.	Date.		Azimuth.	Date.		Azimuth.	Date.		Azimuth.
		s.			s.			s.			s.
Nov.	21	+0.71	Nov.	28	+0.29	Dec.	6	—0.30	Dec.	24	0.00
	22	—1.20		29	—0.45		8	+0.93		26	—1.00
	23	—1.67		30	—0.38		9	+0.93		27	—0.67
	24	—0.91	Dec.	2	—1.52		11	+0.14		29	—0.10
	25	—1.25		4	—1.52		12	+1.25		30	0.00
	26	—0.30		5	—1.52		23	—0.96		31	—0.95
	28	—0.38									

1839.

Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.
	s.		*s.*		*s.*		*s.*
Jan. 23	−1.20	May 3	−0.60	June 29	0.00	Sept. 22	−0.50
24	−1.20	4	−0.60	30	0.00	26	−0.34
26	−1.25	5	−0.60	July 4	+0.50	28	−0.20
30	−1.15	6	+0.60	5	+0.18	Oct. 16	−0.50
Feb. 2	−0.87	8	0.00	7	+0.50	17	−0.20
3	−1.04	10	+0.33	9	+0.27	19	−0.24
4	+0.12	11	+0.40	10	+0.27	20	−0.24
6	−0.30	14	−1.80	11	+0.27	21	−0.45
19	−0.20	15	−0.92	15	+0.20	22	−0.65
21	+0.50	16	−0.92	16	+0.20	23	−0.14
March 1	+0.50	18	+0.25	17	+0.40	25	0.00
3	+0.50	19	+0.25	18	+0.40	26	−0.48
4	+0.46	20	+0.36	21	−0.15	28	0.00
5	0.00	22	+0.36	23	−0.15	Nov. 16	+0.50
24	+0.60	24	−0.40	25	−1.06	17	+0.63
25	+0.60	June 6	−0.34	26	0.00	18	+1.50
26	+0.83	7	−0.34	30	−0.55	19	+0.50
27	+1.05	8	−0.60	31	0.00	20	+0.50
30	−0.57	9	−0.60	Aug. 18	0.00	21	+0.74
31	+1.13	10	−0.60	19	+0.23	22	+0.83
April 4	+1.10	15	−0.25	23	0.00	Dec. 5	+1.12
5	+1.05	16	0.00	24	0.00	6	+0.57
19	+0.42	17	0.00	25	−0.16	9	+0.27
20	−0.48	19	+0.25	31	+0.17	10	+0.20
21	0.00	20	−0.33	Sept. 2	+0.17	12	−0.34
22	+1.15	22	+0.25	15	+0.17	13	−0.34
23	+1.15	23	+0.75	18	−0.50	19	+0.38
25	0.00	25	+0.67	19	−0.50	20	+0.14
26	+0.20	28	+0.25	20	−0.50	25	+0.67
27	+0.20						

1840.

Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.
	s.		*s.*		*s.*		*s.*
Jan. 12	+0.80	March 9	−0.76	April 27	0.00	June 7	−1.17
13	0.00	11	−1.09	May 6	−0.12	8	−0.63
14	0.00	13	−0.42	7	0.00	11	0.00
15	−0.14	17	−0.16	10	−0.50	12	0.00
16	+0.80	21	0.00	11	0.00	13	0.00
18	+2.10	27	−0.70	12	0.00	16	0.00
20	+5.00	29	0.00	13	0.00	17	0.00
23	+1.46	31	0.00	15	−0.43	19	−0.45
25	0.00	April 3	−0.30	16	−0.57	20	−0.80
Feb. 2	−0.34	4	−0.30	17	−0.48	23	−0.45
4	+0.60	8	−1.13	18	−0.25	July 4	−0.20
11	0.00	10	0.00	21	−0.95	5	−0.15
12	+0.20	12	−0.61	22	−0.25	7	−0.15
15	+0.55	13	−0.61	25	−0.34	9	0.00
19	−0.55	15	−0.80	26	+0.12	10	−0.08
20	−0.30	16	−0.80	27	+0.22	11	−0.45
22	−0.50	17	−0.80	30	+0.30	12	−0.60
24	−0.40	18	−0.72	31	+0.30	13	−0.09
25	−0.30	19	−0.94	June 1	+0.30	14	−0.07
26	−1.09	20	−0.68	5	−1.17	15	0.00

1840—Continued.

Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.
	s.		s.		s.		s.
July 16	+0.10	Aug. 22	0.00	Sept. 23	0.00	Nov. 6	—0.80
17	—0.10	24	0.00	Oct. 3	+0.74	9	—0.34
19	—0.20	25	0.00	4	+1.00	10	—0.34
20	0.00	26	0.00	5	+0.07	12	0.00
24	0.00	28	0.00	6	+0.07	13	—0.34
25	0.00	29	0.00	7	+0.07	Dec. 1	—1.43
27	0.00	30	—0.10	8	—0.30	2	—1.62
Aug. 2	0.00	31	+0.20	9	—0.30	3	—0.80
3	0.00	Sept. 6	+0.10	11	—0.60	7	—0.98
5	0.00	7	0.00	12	—0.60	8	—0.98
6	0.00	8	0.00	13	—0.60	9	—0.79
8	+0.30	10	0.00	14	—0.39	10	—0.75
9	—0.10	11	0.00	15	—0.76	11	—0.75
10	—0.10	12	+0.27	31	0.00	13	—0.60
11	—0.26	13	+0.30	Nov. 1	—0.34	14	—0.60
14	—0.96	14	+0.10	2	—0.34	15	—0.60
16	+0.22	15	+0.10	3	0.00	16	—0.60
18	0.00	16	0.00	4	+0.52	17	—0.75
21	0.00	21	0.00	5	—0.50	28	0.00

1841.

Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.
	s.		s.		s.		s.
Jan. 2	—0.50	April 14	—0.10	June 9	—0.50	Aug. 19	+0.55
3	—0.25	15	—0.10	11	0.00	22	—0.15
4	—0.10	19	—0.65	26	—0.34	23	—0.10
8	—0.73	21	—0.86	27	—0.36	24	+0.25
11	—0.70	24	—0.33	28	—0.23	25	+0.18
12	—0.70	25	—0.75	29	—0.28	28	+0.30
30	+1.00	27	0.00	30	—0.43	29	0.00
Feb. 2	—0.17	28	—0.53	July 1	—0.46	30	—0.08
3	0.00	May 1	—0.85	3	+0.13	31	0.00
4	0.00	2	—0.50	4	+0.02	Sept. 1	—0.30
5	—0.15	3	—0.34	5	0.00	2	+0.26
6	0.00	4	—0.34	7	—0.40	4	+0.26
7	0.00	6	—0.63	8	—0.40	5	+0.26
9	—0.40	8	—0.80	9	+0.43	8	+0.15
10	+0.15	14	—1.16	10	0.00	18	+0.15
11	—0.35	15	—0.37	11	—0.17	19	0.00
12	—1.34	16	—0.42	15	—0.71	21	+0.15
27	—0.57	20	—0.87	26	—0.35	23	—0.63
28	—0.33	20	—0.08	27	—0.80	25	—0.26
March 1	+0.30	28	+0.70	28	—0.30	26	—0.08
3	—0.13	29	+0.12	29	—0.59	27	—0.31
6	0.00	31	+0.72	Aug. 1	—0.51	30	—0.18
7	0.00	June 2	+0.40	2	—0.43	Oct. 1	—0.12
8	—0.14	3	—0.30	3	0.00	3	+0.27
14	—0.94	3	—0.11	5	—0.10	4	+0.27
21	+1.17	4	—0.11	6	—0.50	5	+0.27
April 1	—0.80	5	—0.41	7	—0.20	6	+0.15
2	—0.16	6	—0.15	13	0.00	14	0.00
5	—0.37	7	—0.57	15	0.00	17	—0.17
6	—0.10	8	0.00	16	+0.27	18	+0.40

1841—Continued.

Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.
	s.		s.		s.		s.
Oct. 20	+0.90	Oct. 29	+0.84	Nov. 29	+0.34	Dec. 18	+0.06
21	+0.90	Nov. 2	+0.40	30	+0.34	19	+0.05
23	+0.41	4	+0.17	Dec. 1	+0.80	26	—0.55
24	+0.10	5	—0.52	3	—0.40	28	—0.50
25	+0.20	23	0.00	5	—0.11	30	—0.33
26	+0.15	24	+0.20	12	—0.60	31	—0.23
27	+0.95	27	+0.24				

1842.

Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.	Date.	Azimuth.
	s.		s.		s.		s.
Jan. 17	—0.25	Feb. 22	—0.43	April 23	+0.35	May 23	+0.39
18	+0.07	23	—0.80	25	+0.20	25	+0.82
19	—0.02	24	—0.20	26	+0.25	27	+0.20
21	—0.50	27	0.00	27	+0.22	31	+0.65
22	—0.50	March 2	—0.35	28	+0.20	June 1	+0.70
23	—0.41	16	—0.30	28	+0.45	5	+0.77
24	+0.42	20	—0.08	29	+0.47	11	+0.52
26	—0.61	25	—0.40	29	+0.47	12	+0.45
27	—0.61	26	—0.50	30	+0.25	18	+0.40
31	0.00	27	0.00	May 1	+0.25	19	+0.60
Feb. 1	0.00	28	0.00	14	+0.38	21	0.00
17	—0.09	29	0.00	15	+0.38	26	+0.44
18	—1.00	31	0.00	16	+0.62	27	0.00
19	—1.00	April 20	+0.68	17	+1.03	29	0.00
20	—0.97	21	+0.46	18	+1.08	30	0.00
21	—0.65	22	+0.40				

If we call the deviations + when the plane of motion of the true line of collimation is to the eastward of the south meridian, — when westward of that meridian, the character of the sign is determined by the resulting clock errors, and it is + *if the clock be fast* and the error by the lower star exceeds that by the upper, — if that error be less, and vice versa *if the clock be slow.* As these circles converge from the horizon to the zenith, if Δ represent the deviation at the horizon, π the polar distance of any body, and λ the co-latitude of the observatory, their distance at the altitude of that body will be equal to the

$$\Delta \text{ sine } (\pi-\lambda)$$

but as the time occupied by a star in describing any small arc is inversely as its rate of motion, it follows that the correction to be applied to the observed transit of that star will be equal to the

$$\Delta \text{ sine } (\pi-\lambda) \text{ cosec. } \pi \ldots\ldots\ldots\ldots \text{III.}$$

It is manifest that $\pi-\lambda$ becomes negative to the north of the zenith, and the sign of the correction must be reversed for stars between the zenith and pole; but, for the lower culmination, the zenith distance being $2\,\pi-\lambda$, the correction resumes its sign.

EXPLANATION OF THE PRINTED OBSERVATIONS.

Transits observed, and reduction to apparent right ascensions.

Column first, *of the left-hand page*, contains the numbers of the observations on that page, from 1 to the bottom, uninterruptedly. They are to facilitate reference. Asterisks prefixed to them refer to the foot notes.

Column second contains the day of the month, reckoned from the meridian transit of the sun.

Column third contains the names of the objects observed. The letters adopted by Mr. Baily in the Catalogue of the Astronomical Society have been followed throughout the observations. When there are no letters attached, Flamstead's numbers precede the name of the constellation; and when there are neither letters nor numbers, the number of the star in that catalogue is given. To the few observed stars not found in it, the name of the constellation in which they are situated is stated.

Column fourth contains the estimated magnitudes of the stars and age of the moon. Assuming as standards the magnitudes of the 100 stars in the Nautical Almanac catalogue, the *relative* brightness of each object under observation was noted at the termination of its transit across the field—the greatest time being taken, that a correct judgment might be formed. In the case of double stars, the recorded magnitude designates which one has been observed. Much confidence cannot be placed in the estimations of 1838 and the first three months of 1839, the method of comparison not having been sufficiently familiarized. The moon's age, to the nearest tenth of a day, has been taken from the Nautical Almanac list of moon-culminating stars, and increased by .2 for the difference of longitude.

Column fifth contains the apparent declination of the object, to the nearest minute, extracted from the Nautical Almanac, for the given day, or roughly computed from the Catalogue of the Astronomical Society.

Columns sixth to tenth, inclusive, contain the seconds and decimals of time shown by the timekeeper at the passage of the object over each of the five wires, the hours and minutes being inserted at the middle wire only. In observing, the beat of the clock was taken from the dial for each wire, successively, and recorded at the transit, instead of counting on after the first, as is usually the case. The observations were made unassisted, and have been accurately transcribed—no change from the record having been made, except in the *minute* of a transit which is expressed in the notes.

Column one, *of the right-hand page*, contains the means of the wires. Whenever the transits over all five wires have not been observed, those omitted have been supplied as follows, and the mean of all taken.

The times occupied by a star in describing small arcs being inversely to its rate of motion—that is, equal to the arc multiplied by the cosecant of its polar distance—it follows that, if these times be given, their multiplication by the sines of the polar distances will give a value at the equator, or the periods which a star having 90° polar distance would be in passing the same intervals. These *equatorial intervals*, as they are called, being obtained from the means of a multitude of observations, serve as the bases of reduction in all imperfect transits.

The adopted intervals from the 21st November, 1838, to the 23d June, 1840, are:

		s.
From the I	to the III wire	48.17
II	III	23.75
III	IV	23.74
III	V	48.15

From the 4th July 1840, to the 1st June, 1841:

From the I	to the III wire	43.18
II	III	21.74
III	IV	21.78
III	V	43.27

And from the 1st June to the termination of the observations:

From the I	to the III wire	43.43
II	III	21.72
III	IV	21.68
III	V	43.44

Having the distances of any omitted wire from each of the others in value at the equator, they (the distances) are multiplied by the sine of the polar distance of the star, and the results applied with proper signs to the seconds of their respective wires. The mean of these computed times of transit over the omitted wire is adopted in obtaining *the mean of wires.* When there are broken observations of the moon, an additional correction has been applied for parallax at the lateral wire and variation of right ascension in the intervals, which has been computed by the following formula of Mr. Baily:

$$\frac{\theta'}{\cos.\ \delta} \times \frac{1 - \sin.\ \omega \cos.\ \phi \sec.\ \delta}{1 - .00277\, m}$$

θ' representing the equatorial interval, ω the moon's horizontal parallax, ϕ the latitude of the observatory, δ the moon's true declination, and m the true motion in right ascension during 24 solar hours, expressed in degrees.

Column second contains the algebraic sum of the corrections for level, collimation, and azimuth. To facilitate their computation, tables were constructed by formulæ I, II, III, upon assumed instrumental deviations of one second in these elements, for each degree of zenith distance, from 35° north of zenith to 85° south—special calculations being made for stars situated nearer the pole. The tables thus made were entered with the observed zenith distance of the star, and the numbers standing opposite it multiplied by the ascertained transit error, interpolation being adopted for fractional parts of a degree. A table for the azimuth corrections, computed in this manner, affords a ready means of ascertaining the actual deviation from the meridian, without further reference to logarithms. For if we denote the tabular corrections of two selected stars by c and c', and the clock errors by the same stars corrected for rate, level, and collimation, by d and d', then the azimuth is

$$\Delta = d - d' = (c - c') \times x$$

a multiplier immediately obtained by trial.

Column third contains the difference between the means of the wires, corrected by the numbers in the preceding column agreeable to the attached sign, and the apparent right ascension of the star taken from the Nautical Almanac for the given day, or obtained by interpolation when it has not been computed for the day of observation.

Column fourth contains the correction applied to each transit for the clock error. Rejecting from the errors by standard stars those derived from the stars within 15° of the pole, a mean of the rest, and of their corresponding times, is taken. These are considered, respectively, the absolute error of the clock and the mean of the times of observation; and the error for any transit is found by applying to the absolute error, the correction for rate due to the interval from the mean of the times. On the few nights when none of the standard stars have been observed, the error has been found by applying the rates concluded from prior and subsequent observations to the adopted errors at those observations.

Column fifth contains the clock rate adopted, for the period embraced by the observations. The difference of each of the absolute errors on preceding and following days from that of the given day, is divided by the number of days elapsed; and a mean of the two results, according to weight, is used as the proper rate. If observations have been made on each of three consecutive days, the rate is simply a mean of the two quantities; but if three days have transpired (for example) between the first and given days, and the next observations are on the consecutive day thereto, the weight for the latter interval would be 3, whilst that of the former would be 1; in other words, the weights are inversely as the time elapsed.

Column sixth contains the apparent right ascension of the objects observed. This has been obtained by adding algebraically to the mean of the times of transit over the wires the instrumental correction, and applying the clock error with a reversed sign. When a planet has been observed, a further correction has been made, equal to the sidereal time occupied by its semidiameter in passing the meridian; thus reducing the right ascension to its centre. The correction *to be made* for defective illumination of the moon's limb when both were observed, and the corresponding differences from the adopted lunar semidiameter of M. Burckhardt, have been computed by Mr. Walker, after the formula in his paper on moon culminations, (*Transactions of the American Philosophical Society, vol. vi, new series,*) and which may be thus analytically expressed:

$s =$ the ☽'s semidiameter in Nautical Almanac.
$S =$ the correct sidereal time of ☽'s semidiameter passing meridian.
$S' =$ the computed time.
$2\,I =$ the observed duration of the transit of ☽'s defective diameter.
$\alpha =$ the sidereal time of the upper culmination of ☽'s defective limb.
A and $D =$ the ⊙'s right ascension and declination.

Then the complement of the duration of transit of the moon's defective diameter is,

$$(S - I) = S' \cos. D \left(1 + \cos. (\alpha - A)\right)$$

$\Delta s = \frac{s}{S}(S - S') =$ the correction of Burckhardt's semidiameter.

The following table exhibits the observed right ascension of the two limbs, the complement of the duration of the transit, the sidereal time occupied by the passage of the diameter across the meridian, and the corresponding correction of Burckhardt's semidiameter indicated by the observations; the numbers in columns third and fifth resulting from the calculations by the above formulæ:

Date.	Observed transit.				Complement of duration.	Sidereal time of diameter passing meridian.		Correction to Burckhardt's semidiameter.
		h.	m.	s.	s.	m.	s.	″
1839, November 20.....	I	3	44	48.45	.002			
	II	3	47	23.54		2	35.092	+4.42
1840, March 17.....	I	11	48	45.60				
	II	11	50	51.92	.001	2	06.321	+2.80
December 8.....	I	5	03	20.71	Full			
	II	5	05	58.77		2	38.060	—0.19
1841, April 5.....	I	12	58	50.96	Full			
	II	13	01	03.38		2	12.420	+2.08
August 1.....	I	20	38	26.31				
	II	20	40	34.68	.029	2	08.399	+0.60
August 31.....	I	22	41	50.14				
	II	22	43	53.78	.003	2	03.643	+0.60
1842, February 24.....	I	10	28	33.64				
	II	10	30	53.56	.001	2	19.921	+0.77

The mean of seven results indicates a correction of M. Burckhardt's semidiameter of the moon of +1″.59.

Reduction to mean right ascensions.

The first five columns of these pages are transcripts from the preceding pages of the year, and require no further explanation.

Column sixth contains the correction for precession, aberration, and nutation. For stars whose apparent right ascensions have been computed in the Nautical Almanac, the requisite corrections have been found by subtracting the mean from the apparent right ascensions of that work; the latter, in the instances of α Ursæ Minoris, 51 Cephei, δ Ursæ Minoris, and λ Ursæ Minoris, being affected with a correction for nutation depending on 2 ☽. For other stars, not in the Almanac, but found in the Astronomical Society's Catalogue, the corrections have been calculated by Mr. Baily's constants and formula, $Aa + Bb + Cc + Dd$; the logarithms for A, B, C, and D, being taken from the Nautical Almanac, and the constants a, b, c, d, from the Catalogue, where the notation and coefficients are thoroughly explained. (Preface, page xvii.) Corrections for the stars not contained in either of these two volumes have been computed by Bessel's second method,

$$+f+g \sin. (G+\alpha) \tan. \delta + h \sin. (H+\alpha) \sec. \delta$$

an explanation of which, as well as the independent constants f, g, G, H, h, is found in the Nautical Almanac.

The mean right ascension on the 1st January of the year of observation is found by applying to the apparent observed right ascensions with a reversed sign the corrections for precession, &c., just treated of.

Right ascension of the moon and planets.

The right ascension of the moon and planets have been transcribed from the current pages of the year, and printed in this form, for more ready reference.

Occultations of stars by the moon.

The telescope described in page xiv was employed in observing all the occultations contained in the volume, except that of the sun, page 16. By reason of the construction of the building, for distinct vision of the moon at the time of the phenomena, the locality of the instrument was often necessarily changed from the south to the east or west doors; the extreme difference of longitude, however, of the positions occupied is less than 20 feet. The same magnifying power (47) was used throughout the observations, and the time was recorded by the chronometer or clock with which the transit observations were made. Reduction from observed to mean time of observation at Washington has been made in duplicate, upon an assumed acceleration of sidereal time, since Greenwich mean noon, of 50*s*.61.

Catalogue of the stars observed.

The nomenclature of the catalogue is the same as that of the Astronomical Society, from which the declination has been roughly reduced to the nearest minute, and the annual variation copied without alteration. The means of the magnitudes, number of observations, and mean right ascensions on the 1st January, have been transcribed from the pages "*reduction to mean places*;" and the difference between this last and the right ascension of the same star in the A. S. C. has been found by increasing algebraically the times found therein, by the annual variation in right ascension of those stars, multiplied by the number (of years) since 1830, and subtracting from the result the concluded mean right ascension at Washington.

In conclusion, I have but to remark that, to obviate errors of calculation as much as possible, the observations have either been reduced in duplicate, and the copies compared, or the computations of one person have invariably been revised by a second; and the number of those arising from the press have probably been decreased by comparing the proofs with the original records, instead of the manuscript sheets.

ASTRONOMICAL OBSERVATIONS AT WASHINGTON.

1838.

TRANSITS OBSERVED AT WASHINGTON IN 1838.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 21	Moon I	(4.5)	—26°13′	14.0	42.0	19 40 10.0	38.0	6.0
2		α Cephei	3	+61 54	0.7	52.5	21 14 44.0	35.5	28.0
3		β Aquarii	3	— 6 17	15.5	40.5	21 23 04.5	29.5	54.0
4		β Cephei	3	+69 51	11.0	22.5	21 26 32.5	43.5	56.5
5		ε Pegasi	2.3	+ 9 08	27.2	52.0	21 36 16.8	41.5	6.5
6		α Piscis Aus.	1	—30 29	48.9	17.6	22 48 45.5	13.4	42.0
7		α Pegasi	2	+14 20	54.5	19.8	22 56 44.9	9.8	35.5
8	22	Moon I	(5.6)	—22 42	8.7	36.3	20 39 03.5	30.8	58.0
9		η Capricorni	5	—20 29			20 56 11.2	37.0	2.9
10		s Capricorni	5	—15 50	56.0	21.5	21 06 46.8	12.0	37.5
11		α Cephei	3	+61 54	54.5	46.5	21 14 37.8	29.5	21.7
*12		ε Pegasi	2.3	+ 9 08	23.7	48.5	21 36 13.2	38.0	3.0
13		α Piscis Aus.	1	—30 29	45.8	14.0	22 48 42.5	10.5	39.3
14		α Pegasi	2	+14 20	51.3	16.5	22 56 41.5	6.8	32.5
15	23	s Capricorni	5	—15 50	53.5	18.8	21 06 44.0	9.4	35.0
16		α Cephei	3	+61 54	49.0	41.5	21 14 32.8	24.7	16.5
17		β Cephei	3	+69 51	0.5	11.0	21 26 21.5	32.0	43.5
18		Moon I	(6.6)	—17 48	29.0	55.5	21 36 21.8	47.9	14.5
19		δ Capricorni	3.4	—16 51	11.3	36.9	21 38 02.0	27.5	53.5
20		ι Aquarii	4.5	—14 39	47.0	12.4	21 57 37.5	2.5	28.0
21		α Piscis Aus.	1	—30 29	42.5	10.9	22 48 39.0	7.0	35.7
22		α Pegasi	2	+14 20	47.3	12.9	22 56 38.0	3.0	28.5
23	24	α Cephei	3	+61 54	45.3	37.5	21 14 28.8	20.5	12.8
24		β Cephei	3	+69 51	57.0	7.2	21 26 17.8	28.6	40.2
25		δ Capricorni	3.4	—16 51	4.8	30.4	21 37 55.5	21.0	47.0
26		ι Aquarii	4.5	—14 39	41.0	6.2	21 57 31.5	56.7	22.0
27		Moon I	(7.6)	—11 52	22.7	48.5	22 29 13.8	39.5	5.0
28		λ Aquarii	4	— 8 26	11.0	36.0	22 44 00.5	25.0	50.0
29		α Piscis Aus.	1	—30 29	36.1	4.5	22 48 32.8	1.0	29.7
30		α Pegasi	2	+14 20	41.5	7.0	22 56 32.0	57.0	22.5
31	25	Moon I	(8.7)	— 5 12	47.0	11.8	23 21 37.0	2.0	27.3
32		ι Piscium	4.5	+ 4 45	35.5	0.1	23 31 24.5	48.9	12.5
33		γ Cephei	3	+76 44	52.2	39.5	23 32 26.7	14.5	1.5
31		n Piscium	5.6	— 3 40	35.0	59.6	23 39 24.0	48.5	13.0
35		q Piscium	5	— 3 56	29.8	54.0	23 53 18.0	42.7	7.5
36		α Andromedæ	1	+28 12	52.5	20.0	23 59 48.0	15.5	43.5
37		β Ceti	2.3	—18 52	23.5	49.5	0 35 15.0	40.8	6.8
38	26	γ Cephei	3	+76 44	55.0	42.5	23 32 28.0	15.0	2.0
39		n Piscium	5.6	— 3 40	34.0	58.6	23 39 22.7	47.0	11.5
40		q Piscium	5	— 3 56	28.2	53.0	23 53 17.0	41.6	6.0
41		α Andromedæ	1	+28 12	51.5	19.7	23 59 47.0	14.7	42.5
42		Moon I	(9.7)	+ 1 51	55.4	20.8	0 13 45.3	10.2	35.5
43		t Piscium	6	+ 1 03	3.0	27.5	0 16 51.8	16.0	40.3
44		β Ceti	2.3	—18 52	22.1	48.0	0 35 13.0	39.4	5.0
*45		79 A. S. C.	6	+ 4 28	51.0	15.5	0 39 39.8	4.2	28.9
46	28	β Ceti	2.3	—18 52	18.5	44.5	0 35 10.2	36.0	2 0
47		θ^1 Ceti	3	— 9 01	49.2	14.0	1 15 38.2	3.2	28.0

November 21.—Examined errors of collimation and level.
26.—No error in level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
19	40	10.00	+ .709			+0	01.43	—3.15	19	40	09.28	1
21	14	44.14	— .589	+0	01.46		.23		21	14	42.32	2
21	23	04.80	+ .499	0	01.18		.21		21	23	04.09	3
21	26	33 20	—1.071	0	00.75		.20		21	26	31.93	4
21	36	16.80	+ .352	0	01.04		.19		21	36	15.96	5
22	48	45.48	+ .760	0	01.70		.02		22	48	45.22	6
22	56	44.90	+ .300	+0	00.70	+0	01.00	—3.15	22	56	44.20	7
20	39	03.46	—1.142			—0	03.07	—3.60	20	39	05.39	8
20	55	11.20	—1.103				.12		20	55	13.22	9
21	06	46.76	—1.013				.14		21	06	48.89	10
21	14	38.00	+1.010	—0	03.04		.16		21	14	42.17	11
21	36	13.28	— .606	0	03.44		.21		21	36	15.88	*12
22	48	42.42	—1.303	0	03.38		.39		22	48	44.51	13
22	56	41.72	— .509	—0	03.29	—0	03.41	—3.60	22	56	44.62	14
21	06	44.14	—1.441			—0	07.16	—4.30	21	06	49.86	15
21	14	32.90	+1.383	—0	07.73		.18		21	14	41.46	16
21	26	21.70	+2.461	0	07.10		.21		21	26	31.37	17
21	36	21.74	—1.442				.24		21	36	27.54	18
21	38	02.24	—1.419				.24		21	38	07.66	19
21	57	37.48	—1.365				.30		21	57	43.42	20
22	48	39.02	—1.784	0	07.25		.43		22	48	44.67	21
22	56	37.94	— .700	—0	07.25	—0	07.45	—4.30	22	56	44.69	22
21	14	28.98	+ .758	—0	12.21	—0	12.16	—4.56	21	14	41.90	23
21	26	18.16	+1.349	0	11.69		.20		21	26	31.71	24
21	37	55.74	— .777				.24		21	38	07.20	25
21	57	31.48	— .747				.30		21	57	43.03	26
22	29	13.90	— .721				.40		22	29	25.58	27
22	44	00.50	— .670				.45		22	44	12.28	28
22	48	32.82	— .978	0	12 63		.46		22	48	44.30	29
22	56	32.00	— .386	—0	12.77	—0	12.48	—4.56	22	56	44.09	30
23	21	37.02	— .874			—0	16.77	—2.50	23	21	52.92	31
23	31	24.30	— .711	—0	16.59		.79		23	31	40.38	32
23	32	26.88	+3.342	0	16.86		.79		23	32	47.01	33
23	39	24.02	— .846				.81		23	39	39.98	34
23	53	18.40	— .851				.83		23	53	34.48	35
23	59	47.90	— .262	0	16.94		.84		0	00	04.48	36
0	35	15.12	—1.116	—0	16.94	—0	16.90	—2.50	0	35	30.90	37
23	32	28.50	+ .802	—0	17.69	—0	17.61	—2.03	23	32	46.91	38
23	39	22.76	— .203				.62		23	39	40.18	39
23	53	17.16	— .204				.64		23	53	34.60	40
23	59	47.08	— .063	0	17.55		.65		0	00	04.67	41
0	13	45.44	— .181				.66		0	14	02.92	42
0	16	51.72	— .184				.67		0	17	09.21	43
0	35	13.50	— .278	—0	17.71		.70		0	35	30.92	44
0	39	39.88	— .177			—0	17.70	—2.03	0	39	57.40	*45
0	35	10.24	— .335	—0	21.02	—0	21.04	—2.70	0	35	30.94	46
1	15	38.52	— .282	0	21.20		.11		1	15	59.35	47

No 12. Observation doubtful.
45 Differs from N. A. +2s.66.

TRANSITS OBSERVED AT WASHINGTON IN 1838.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 28	η Piscium	4	+14°31′	41.7	7.0	1 22 31.8	57.2	22.3
2		ο Piscium	5	+ 8 20	44.0	9.0	1 36 33.5	58.0	22.8
3		α Arietis	3	+22 42	53.2	19.8	1 57 46.0	12.7	39.0
4		Moon I	(11.8)	+15 30	5.0	31.3	2 02 56.8	22.6	48.4
5		ψ Arietis	6	+16 59	47.5	13.0	2 21 39.5	5.2	31.0
6		ν Arietis	5.6	+21 15	29.7	56.0	2 29 21.5	47.8	13.8
*7		β Tauri	2	+28 28	55.0	21.4	5 15 47.8	15.0	41.5
*8		α Leporis	3.4	—17 56	27.4	54.0	5 25 19.0	44.0	9.6
*9		α Columbæ	2	—34 10	31.5	0.5	5 33 30.5	0.2	29.5
*10		α Orionis	1	+ 7 22	18.5	43.0	5 46 07.5	32.0	57.0
*11		δ Geminorum	3.4	+22 16	17.3	43.5	7 10 10.5	36.2	1.5
12	29	α Ceti	2.3	+ 3 27	41.5	6.0	2 53 30.5	54.7	19 0
13		Moon I	(12.8)	+21 11	32.0	58.8	3 02 25.5	52.3	19.0
14		ζ Arietis	5	+20 26	25.5	51.0	3 05 17.5	43.5	9.5
15		g Arietis	5.6	+24 09	33.5	0.0	3 14 26.5	53.5	20.0
16		η Tauri	3	+23 36	40.3	7.0	3 37 33.5	0.0	26.8
17	30	g Arietis	5.6	+24 09	27.5	54.5	3 14 21.0	47.8	14.8
18		η Tauri	3	+23 36	34.2	1.5	3 37 27.6	54.0	20.9
19		γ¹ Eridani	2.3	—13 58	13.3	39.0	3 50 03 5	29.0	54.3
20		Moon I	(13.8)	+25 27	41.1	9.0	4 05 37.0	4.5	32.5
21	Dec. 2	β Tauri	2	+28 28	28.0	56.0	5 15 23.5	51.0	19.0
22		α Leporis	3.4	—17 56	3.5	29.0	5 24 55.0	20.5	46.0
23		C Tauri	4.5	+27 34			5 42 28.2	56.0	23.7
24		κ Aurigæ	4	+29 33	27.0	55.0	6 04 23.0	51.2	19.7
25		μ Geminorum	3	+22 36	36.9	3.2	6 12 29.5	55.8	22.5
26		Moon II	(15.9)	+28 22	57.8	26.0	6 19 54.2	22.5	51.0
27		ε Geminorum	3	+25 17	23.7	51.0	6 33 17.5	44.8	11.8
28		α Canis Maj.	1	—16 30	29.5	55.0	6 37 20.2	45.5	11.0
29		ω¹ Geminorum	6	+24 26	58.3	25.0	6 51 51.8	18.5	45.5
30	4	β Geminorum	2	+28 25	37.5	5.5	7 31 33.2	0.5	28.5
31		φ Geminorum	5	+27 11	49.0	16.7	7 42 44.0	10.8	38.5
*32		Moon II	(18.0)	+23 54	3.8	31.5	8 21 58.9	25.5	53.2
33	5	Moon II	(19.0)	+19 41	48.0	14.0	9 15 41.0	7.8	34 0
34		α Hydræ	2	— 7 58	52 0	17.0	9 18 41.5	6.0	31 0
35		λ Leonis	4.5	+23 41	39.5	6.0	9 21 33.0	59.5	26.0
36		ψ Leonis	6	+14 46	7.5	33.0	9 33 58.0	23.0	48.5
37	6	λ Leonis	4.5	+23 41	36.2	3.5	9 21 30.0	56.5	23.0
38		ψ Leonis	6	+14 46	5.2	30.5	9 33 55.9	21.0	46.2
39		α Leonis	1	+12 45	55.5	21.0	9 58 45.9	10.8	36.0
40		Moon II	(20.1)	+14 44	0.5	26.5	10 04 52.2	17.5	43.5
41		γ Leonis	2	+20 40	11.5	37.0	10 10 03.2	29.5	55.7
42		ζ Leonis	4	+10 08	28.5	53.1	10 23 18.0	42.5	7.5
43		α Ursæ Maj.	2	+62 37	56.2	49.7	10 52 42.9	35.0	28.5
44	8	χ Leonis	4.5	+ 8 13	45.2	9.7	10 55 34.5	59.0	24.0
45		δ Leonis	3	+21 24	32.0	58.4	11 04 24.5	50.5	16.5
46		δ Hyd. & Crat.	3.4	—13 54	19.0	44.0	11 10 09.4	34.2	59.5

December 2.—Examined instrumental adjustments.
8.—Examined collimation and level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
1 22 32.00	— .160		—0 21.12	—2.70	1 22 52.96	1
1 36 33.46	— .182		.15		1 36 54.43	2
1 57 46.14	— .113	—0 21.10	.18		1 58 07.21	3
2 02 56.82	— .154		.19		2 03 17.86	4
2 21 39.24	— .146		.23		2 22 00.32	5
2 29 21.76	— .121		0 21.24		2 29 41.88	6
5 15 48.14	+ .064	—0 19.98	0 20.02		5 16 08.22	* 7
5 25 18.80	+ .330	0 19.89	.04		5 25 39.17	* 8
5 33 30.44	+ .433	0 19.84	.05		5 33 50.92	* 9
5 46 07.60	+ .193	0 20.58	.07		5 46 27.86	*10
7 10 09.80	+ .110	—0 21.10	—0 20.23	—2.70	7 10 30.14	*11
2 53 30.34	— .261	—0 22.97	—0 22.92	—3.70	2 53 53.00	12
3 02 25.52	— .147		.96		3 02 48.33	13
3 05 17.40	— .152		.97		3 05 40.22	14
3 14 26.88	— .126		.99		3 14 49 74	15
3 37 33.52	— .130	—0 22.98	—0 23.05	—3.70	3 37 56.44	16
3 14 21.12	— .104		—0 28.54	—6.80	3 14 49.56	17
3 37 27.64	— .108	—0 28.84	.64		3 37 56.18	18
3 50 03.82	— .308	—0 28.53	.70		3 50 32.21	19
4 05 36.80	— .097		—0 28.77	—6.80	4 06 05.47	20
5 15 23.50	— .309	—0 45.06	—0 45.06	—6.50	5 16 08.25	21
5 24 54.80	—1.339	0 45.62	.10		5 25 38.56	22
5 42 28.20	— .337		.18		5 43 13.04	23
6 04 23.18	— .283		.28		6 05 08.18	24
6 12 29.58	— .463	0 45.08	.31		6 13 14.43	25
6 19 54.30	— .314		.35		6 20 39 34	26
6 33 17.76	— .395		.41		6 34 02.77	27
6 37 20.24	—1.305	—0 45.12	.43		6 38 04.37	28
6 51 51.82	— .416		—0 45.49	—5.50	6 52 36.89	29
7 34 33.04	— .313	—0 55.62	—0 55.62	—4.54	7 35 28.35	30
7 42 43.80	— .347		.64		7 43 39.09	31
8 21 58.58	— .441		—0 55.77	—4 54	8 22 53.91	*32
9 15 40.96	— .542		—0 59.80	—3.17	9 16 30.22	33
9 18 42.18	—1.120	—0 59.81	.81		9 19 40.87	34
9 21 32.80	— .435		.82		9 22 32.18	35
9 33 58.00	— .642		—0 59.84	—3.17	9 34 57.20	36
9 21 29.84	— .085		—1 02 17	—2.42	9 23 31.93	37
9 33 55.96	— .127		.19		9 34 58.02	38
9 58 45.84	— .136	—1 02.23	.23		9 59 47.93	39
10 04 52.04	— .127		.25		10 05 54.16	40
10 10 03.38	— .102		.26		10 11 05.54	41
10 23 17.92	— .146		.28		10 24 20.05	42
10 52 42.46	+ .258	—1 02.33	—1 02.32	—2.42	10 53 45.04	43
10 55 34.48	+ .610		—1 07.41	—3.61	10 56 42.50	44
11 04 24.38	+ .302	—1 07.47	.43		11 05 32.10	45
11 10 09.22	+ .769	—1 07.46	—1 07.45	—3.61	11 11 17.45	46

Nos. 7, 8, 9, 10, and 11, Observed by Mr. Wickham.
No. 32, Observation uncertain, from passing clouds.

TRANSITS OBSERVED AT WASHINGTON IN 1838.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 8	σ Leonis	4	+ 6°55′	54 0	18.0	11 11 42.0	6.2	31.0
•2		Hyd. & Crat.		—31 46	34.5	3.0	11 25 31.8	0.5	29.5
3		Moon II	(22.1)	+ 3 35	23.5	48.2	11 34 13.5	38.0	2.7
4		β Virginis	3.4	+ 2 41	21.0	45.7	11 41 10.5	34.3	58.5
5		b Virginis	5.6	+ 4 33	44.5	9.2	11 50 33.5	58.0	22.3
6		a Corvi	4.5	—23 49	4.5	31.7	11 58 58.0	24.7	51.0
7	9	β Virginis	3.4	+ 2 41	17.0	42.0	11 41 06.0	30.3	54.5
8		b Virginis	5.6	+ 4 33	40.2	5.2	11 50 29.5	54.0	18.5
9		a Corvi	4.5	—23 49	0.6	27.8	11 58 54.5	21.0	47.7
10		Moon II	(23.2)	— 2 13	4.7	30.0	12 16 54.5	19.6	44.0
11	11	β Orionis	1	— 8 23	35.0	0.0	5 05 25.0	49.5	14.0
12		α Columbæ	2	—34 10	27.0	57.0	5 32 26.0	55.5	25.0
13		α Orionis	1	+ 7 22	14.5	39.5	5 45 04.0	28.5	53.0
14		Moon II	(25.2)	—13 24	34.5	0.5	13 44 26.2	51.7	17.5
15	12	β Tauri	2	+28 28	38.0	6.0	5 14 34.0	2.0	30.0
16		α Leporis	3.4	—17 56	12.0	38.0	5 24 04.0	29.5	55.0
17		α Columbæ	2	—34 10	15.5	46.0	5 32 15.5	45.5	14.0
18		α Orionis	1	+ 7 22	4.0	29.0	5 44 53.5	18.0	42.5
19		Moon II	(26.2)	—18 25	44.0	10.5	14 31 37.0	3.5	29.5
20	23	κ¹ Piscium	5.6	+ 0 22	12.5	37.0	23 21 01.6	25.5	50.0
21		ι Piscium	4.5	+ 4 45	11.5	36.2	23 34 00.5	24.8	49.8
22		Moon I	(6.9)	— 0 12	33.8	58.5	23 59 23.5	48.3	13.5
23		α Andromedæ	1	+28 12	29.0	56.8	0 02 24.5	52.5	20.0
24		ι Ceti	4	— 9 43	45.0	9.8	0 13 34.5	59.2	24.2
25		f Piscium	6	+ 1 03	41.5	6.0	0 19 30.5	54.8	19.0
26		ε Orionis	2.3	— 1 18	38.5	3.0	5 30 27.5	52.0	16.5
27		α Columbæ	2	—34 10	16.0	46.0	5 36 15.0	44.5	14.0
28	24	ι Ceti	4	— 9 43	57.5	22.5	0 13 47.2	12.0	36.7
29		f Piscium	6	+ 1 03	54.0	18.5	0 19 42.5	7.0	31.5
30		δ Andromedæ	3	+29 58	21.0	49.5	0 33 17.5	45 5	13.5
31		β Ceti	2.3	—18 52	13.0	39.0	0 38 04.5	30.2	56.0
32		Moon I	(8.0)	+ 6 43	18.5	44 5	0 51 09.5	34.7	59.7
33		ε Piscium	4	+ 7 01	20.2	45.0	0 57 09.5	34.2	58.8
34		μ Piscium	5	+ 5 18	30.7	55.8	1 24 19.5	44.1	8.5
35		101 Piscium	6	+13 50	54.5	19.8	1 29 44.6	9.5	34.5
36	26	γ¹ Arietis	4.5	+18 30	27.1	53.0	1 46 18.5	44.4	10.5
37		ν² Ceti	4.5	—21 51	9.5	36.1	1 54 02.1	28.5	54.9
38		α Arietis	3	+22 42	50.8	17.0	1 59 43.2	9.5	36.2
39		θ¹ Arietis	6	+19 09	56.2	22.0	2 10 47.5	13.0	39.5
40		ν Arietis	5.6	+21 16	26.2	52.5	2 31 18.5	44.7	11.0
41		Moon I	(10.0)	+19 11	50.1	16.8	2 39 42.8	9.2	36.0
42		τ² Eridani	4.5	—21 40	30.0	56.5	2 45 22.5	48.8	15.0
43		ε Arietis	5	+20 41	46.5	13.0	2 51 39.0	5.0	31.5
44		δ Arietis	4	+19 07	12.5	38.5	3 04 04.2	30.0	56.0
45	27	ε Arietis	5	+20 41	25.5	51.5	2 51 17.5	43.5	9.5
46		δ Arietis	4	+19 07	51.4	17.5	3 03 43.1	9.0	35.5

December 13.—Examined the collimation and level adjustments, and found them correct.
24.—Corrected instrumental adjustments at 3 P. M. After the observations, stopped the clock, and shortened the pendulum 30 divisions of the divided screw.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
11 11 42.21	+ .487		—1 07.45	— 3.61	11 12 50.18	1
11 25 31.86	+1.040		.49		11 26 40.39	*2
11 34 13.18	+ .544		.51		11 35 21.23	3
11 41 10.00	+ .554		.53		11 42 18.08	4
11 50 33.50	+ .531		.55		11 51 41.58	5
11 58 57.98	+ .909		—1 07.57	— 3.61	12 00 06.46	6
11 41 05.96	+ .554		—1 11.71	— 6.33	11 42 18.22	7
11 50 29.48	+ .531		.73		11 51 41.74	8
11 58 54.32	+ .909		.79		12 00 07.02	9
12 16 54.56	+ .614		—1 11.83	— 6.33	12 18 07.00	10
5 05 24.70	+ .106	—1 24.59	—1 24.47	— 8.55	5 06 49.28	11
5 32 26.10	+ .165	1 24.62	.59		5 33 50.86	12
5 45 03.90	+ .075	—1 24.63	24.71		5 46 28.68	13
13 44 26.08	+ .116		—1 26.45	— 8.55	13 45 52.65	14
5 14 34.00	+ .256	—1 34.15	—1 34.21	— 9.32	5 16 08.47	15
5 24 03.70	+1.119	1 34.39	.28		5 25 39.10	16
5 32 15.30	+1.445	1 34.15	.33		5 33 51.07	17
5 44 53.40	+ .660	—1 34.55	34.41		5 46 28.47	18
14 31 36.90	+1.107		—1 37.81	— 9.32	14 33 15.82	19
23 21 01.32	— .607		+2 19.91	—11.50	23 18 40.80	20
23 34 00.56	— .540	+2 20.12	20.01		23 31 40.01	21
23 59 23.42	— .606		.21		23 57 02.60	22
0 02 24.56	— .202	2 20.11	.23		0 00 04.13	23
0 13 34.54	— .731		.32		0 11 13.49	24
0 19 30.36	— .589		20.37		0 17 09.40	25
5 30 27.50	— .619	2 22.78	22.86		5 28 04.02	26
5 36 15.10	—1.110	+2 23.02	+2 22.91	—11.50	5 33 51.08	27
0 13 47.18			+2 34.21	—13.71	0 11 12.97	28
0 19 42.70			.15		0 17 08.55	29
0 33 17.40			34.02		0 30 43.38	30
0 38 04.54		+2 33.97	33.96		0 35 30.58	31
0 51 09.38			.91		0 48 35.47	32
0 57 09.54			.85		0 54 35.69	33
1 24 19.72			.64		1 21 46.18	34
1 29 44.58			+2 33.49	—13.71	1 27 11.09	35
1 46 18.70	— .366		+1 35.61	+21.20	1 44 42.72	36
1 54 02.22	— .940		.72		1 52 25.56	37
1 59 43.34	— .301	+1 36.05	.80		1 58 07.24	38
2 10 47.64	— .357		35.96		2 09 11.32	39
2 31 18.58	— .324		36.27		2 29 41.99	40
2 39 42.98	— .356		.39		2 38 06.23	41
2 45 22.56	— .935		.48		2 43 45.14	42
2 51 39.00	— .333		.56		2 50 02.11	43
3 04 04.24	— .358		+1 36.76	+21.20	3 02 27.12	44
2 51 17.50	— .222		+1 15.39	+70.37	2 50 01.99	45
3 03 43.30	— .238		.98		3 02 27.08	46

December 26.—Stopped the clock after the observations, and added one ounce of mercury to the cistern of the pendulum.

No. 2 Recorded as ζ *Hydræ & Crateris.*

TRANSITS OBSERVED AT WASHINGTON IN 1838.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s	s.
1	Dec. 27	12 Eridani	3.4	—29°37′	36.1	4.5	3 06 32.5	0.5	28.5
2		16 Eridani	3.4	—22 21	47.0	13.5	3 13 39.7	6.0	32.5
3		b Pleiadum	4.5	+23 36	45.0	11.5	3 36 38.5	4.5	31.5
4		η Tauri	3	+23 36	20 0	46.5	3 39 13.3	40.0	7.0
5		Moon I	(11.1)	+23 54	28.5	56.0	3 39 23.0	50.0	17.0
6		ζ Persei	3.4	+31 24	23.5	52.0	3 45 20.0	48.0	17.0
7		γ^1 Eridani	2.3	—13 58	0.5	26 0	3 51 51.0	16.0	41.5
8		A^1 Tauri	5	+21 38	38.5	4.5	3 56 30.5	56.5	23.2
9	29	ι Tauri	4.5	+21 21	50.7	17.0	4 56 43.0	9.2	35.5
10		ε Leporis	4	—22 35	1.0	27.5	5 01 53.5	20.0	46.5
11		β Tauri	2	+28 28	26.9	54.5	5 19 22.5	50.3	18.0
12		β Leporis	4	—20 53	44.0	10.5	5 24 36.5	2.5	29.0
13		α Leporis	3.4	—17 56	2.0	28.5	5 28 53.5	19.5	45.0
14		α Columbæ	2	—34 10	6.6	36.5	5 37 05.5	35.0	4.5
15		Moon I	(13.1)	+28 24	12.2	41.0	5 50 09.0	37.5	6.5
16		κ Aurigæ	4	+29 33	28.2	56.5	6 08 24.5	52.5	20.5
17		μ Geminorum	3	+22 35	37.7	4.5	6 16 31.0	57.3	24.0
18	30	α Columbæ	2	—34 10	5.5	35.0	5 38 04.5	33.5	3.5
19		η Leporis	4	—14 12	29.0	54.5	5 53 19.5	44.5	10.0
20		κ Aurigæ	4	+29 33	27.0	55.2	6 09 23.2	51.2	19.5
21		μ Geminorum	3	+22 35	36.5	3.0	6 17 29.5	55.9	22.5
22		α Canis Maj.	1	—16 30	29.5	54.5	6 42 20.2	45.5	11.5
23		o^1 Canis Maj.	4	—23 59	51.0	18.0	6 51 44.5	11.5	38.5
24		Moon II	(14.2)	+27 46	19.1	47.5	6 57 15 5	44.0	12.5
25		τ Geminorum	5	+30 30	14.5	43.0	7 05 11.3	39.5	8.0
26		e^1 Canis Maj	4.5	—26 05	5.5	33.0	7 11 59.7	27.0	54 5
27		δ Geminorum	3.4	+22 16	56.0	22.5	7 14 48.5	15.0	41.5
28	31	ε Canis Maj.	2.3	—28 45	12.5	40.5	6 53 08 0	36.0	4.0
29		τ Geminorum	5	+30 30	46.5	15.5	7 01 43.5	11.5	40.5
30		c^1 Canis Maj.	4.5	—26 05	38.5	5.5	7 08 32.5	0.0	27.5
31		δ Geminorum	3.4	+22 16	28.0	54.5	7 11 21.0	47.8	14.5
32		ι Geminorum	4	+28 07	39.5	7.5	7 16 34.5	2.5	30.0
33		β Geminorum	2	+28 25	24.2	52.5	7 36 20.0	47.7	15.5
34		ξ Argus	4	—24 27	31.5	58.5	7 43 24.7	51.5	18.5
35		Moon II	(15.2	+25 22	13.5	41.5	7 56 08.4	36.0	3.5
*36		15 Argus	3.4	—23 50	42.7	9.5	8 01 36.3	2.9	30.0
37		λ Cancri	6	+24 32	58.5	25.5	8 11 52.2	19.0	46.0
38		η Cancri	6	+20 59	27.0	53.0	8 24 19.0	45.2	11.5

December 27.—Lengthened pendulum 7 divisions after the observations.
30 —Altered the pendulum.
31.—Examined instrumental adjustments at 3 P. M.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*m. s.*	*m. s.*	*s.*	*h. m. s.*	
3 06 32.42	— .713		+1 16.13	+ 70.37	3 05 15.58	1
3 13 39.74	— .632		16.47		3 12 22.64	2
3 36 38.20	— .192		17.60		3 35 20.41	3
3 39 13.36	— .192	+1 16 72	17.73		3 37 55.44	4
3 39 22.90	— .188		17.74		3 38 04.97	5
3 45 20.10	— .101		18.03		3 44 01.97	6
3 51 51.00	— .548	+1 18.05	18.25		3 50 32.20	7
3 56 30.64	— .212		+1 18.57	+ 70.37	3 55 11.86	8
4 56 43.08	— .032		+3 13.01	+ 55.54	4 53 30.04	9
5 01 53.70	— .095		13.21		4 58 40.40	10
5 19 22.44	— .020	+3 13.83	13.88		5 16 08.54	11
5 24 36.50	— .092		14.09		5 21 22.32	12
5 28 53.62	— .088	14.21	14.25		5 25 39.28	13
5 37 05.62	— .115	14.51	14.56		5 33 50.95	14
5 50 09.24	— .020		15.06		5 46 54.16	15
6 08 24.44	— .018		15.76		6 05 08.66	16
6 16 30.90	— .030	+3 16.19	+3 16.08	+ 55.54	6 13 14.79	17
5 38 04.40		+4 13.41	+4 13.38	+ 52.87	5 33 51.02	18
5 53 19.50			13.93		5 49 05.57	19
6 09 23.22			14.51		6 05 08.71	20
6 17 29.48		14.79	14.80		6 13 14.68	21
6 42 20.24		15.72	15.71		6 38 04.53	22
6 51 44.70			16.05		6 47 28.65	23
6 57 15.72			16.26		6 52 59.46	24
7 05 11.26			16.55		7 00 54.71	25
7 11 59.94			16.79		7 07 43.15	26
7 14 48.70		+4 16.92	+4 16.89	+ 52.37	7 10 31.81	27
6 53 08.20	—1.002	+0 47.67	+0 47.70	+103.50	6 52 19.50	28
7 01 43.50	— .161		48.32		7 00 55.02	29
7 09 32.80	— .957		48.81		7 07 43.03	30
7 11 21.16	— .284	49.08	49.01		7 10 31.87	31
7 16 34.80	— .201		49.39		7 15 44.21	32
7 36 19.98	— .196	50.74	50.79		7 35 28.99	33
7 43 24.94	— .933		51.31		7 42 32.70	34
7 56 08.58	— .246		52.29		7 55 16.04	35
8 01 36.28	— .928	+0 52.65	52.62		8 00 42.74	*36
8 11 52.24	— .259		53.35		8 10 58.63	37
8 24 19.14	— .318		+0 54.24	+103.50	8 23 24.59	38

No. 36. Recorded ‘ *Navis.*

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1838.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1838.
				h. m. s.	s.	h. m. s.
Nov. 25	21 Andromedæ α	1	5	0 00 04.48	+3.002	0 00 01.478
26		1	5	04.67	2.992	01.678
Dec. 23		1	5	04.13	2.664	01.466
Means		1				0 00 01.540
Dec. 23	8 Ceti ι	4	5	0 11 13.49	+3.782	0 11 09.708
24		4	5	12.97	.817	09.153
Means		4				0 11 09.430
Nov. 26	44 Piscium *t*	6	5	0 17 09.21	+3.320	0 17 05.890
Dec. 23		6	5	09.40	.070	06.330
24		6	5	08.55	.060	05.490
Means		6				0 17 05.903
Dec. 24	31 Andromedæ δ	3	5	0 30 43.38	+2.930	0 30 40.450
Nov. 25	16 Ceti β	2.3	5	0 35 30.90	+3.595	0 35 27.305
26		2.3	5	30 92	.587	27.333
28		2.3	5	30.94	.570	27.370
Dec. 24		2.3	5	30.58	.305	27.275
Means		2.3				0 35 27.321
Nov. 26	79 A. S. C.	6	5	0 39 57.40	+3.412	0 39 53.988
Dec. 24	71 Piscium ε	4	5	0 54 35.69	+3.222	0 54 32.468
Nov. 28	45 Ceti θ^1	3	5	1 15 59.35	+3.633	1 15 55.717
Dec 24	98 Piscium μ	5	5	1 21 46.18	+3.802	1 21 42.378
Nov. 28	99 Piscium η	4	5	1 22 52.96	+3.758	1 22 49.202
Dec. 24	101 Piscium	6	5	1 27 11.09	+3.468	1 27 07.622
Nov. 28	110 Piscium ο	5	5	1 36 54.43	+3.826	1 36 50.614
Dec. 26	5 Arietis γ^1	4.5	5	1 44 42.72	+3.658	1 44 39.062
Dec. 26	59 Ceti ν^2	4.5	5	1 52 25.56	+3.584	1 52 21.976
Nov. 28	13 Arietis α	3	5	1 58 07.21	+3.878	1 58 03.332
Dec. 26		3	5	07.24	.738	3.502
Means		3				1 58 03.417
Dec. 26	22 Arietis θ^1	6	5	2 09 11.32	+3.792	2 09 07.528
Nov. 28	27 Arietis ψ	6	5	2 22 00.32	+3.958	2 21 56.362
Nov. 28	32 Arietis ν	5.6	5	2 29 42.88	+4.048	2 29 38.832
Dec. 26		5.6	5	41.99	3.971	38.019
Means		5.6				2 29 38.425

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1838.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1836.
				h. m. s.	s.	h. m. s.
Dec. 26	2 Eridani τ²	4.5	5	2 43 45.14	+3.740	2 43 41.400
Dec. 26 27	48 Arietis ε	5 5	5 5	2 50 02.11 01.99	+4.114 .108	2 49 57.996 57.882
Means		5				2 49 57.939
Nov. 29	92 Ceti α	2.3	5	2 53 53.00	+3.961	2 53 49.039
Dec. 26 27	57 Arietis δ	4 4	5 5	3 02 27.12 27.08	+4.175 .190	3 02 22.945 22.890
Means		4				3 02 22.917
Dec. 27	12 Eridani	3.4	5	3 05 15.58	+3.903	3 05 11.677
Nov. 29	58 Arietis ζ	5	5	3 05 40.22	+4.215	3 05 36.005
Dec. 27	16 Eridani	3.4	5	3 12 22.64	+4 084	3 12 18.556
Nov. 29 30	64 Arietis g	5.6 5.6	5 5	3 14 49.74 49.56	+4.325 .330	3 14 45.415 45.230
Means		5.6				3 14 45.322
Dec. 27	17 (Pleiadum) b	4.5	5	3 35 20.41	+4 583	3 35 15.827
Nov. 29 30 Dec. 27	25 Tauri η	3 3 3	5 5 5	3 37 56.44 56.18 56.44	+4.414 .421 .500	3 37 52.026 51.759 51.940
Means		3				3 37 51.908
Dec. 27	44 Persei ζ	3.4	5	3 44 01.97	+4.759	3 43 57.211
Nov. 30 Dec. 27	34 Eridani γ¹	2.3 2.3	5 5	3 50 32.21 32.20	+3.914 .966	3 50 28 296 28.234
Means		2.3				3 50 28.265
Dec. 27	37 Tauri A¹	5.6	5	3 55 11.86	+4.559	3 55 07.301
Dec. 29	102 Tauri ι	4.5	5	4 53 30.04	+4.849	4 53 25.191
Dec. 29	2 Leporis ε	4	5	4 58 40.40	+3 995	4 58 36.405
Dec. 11	19 Orionis β	1	5	5 06 49.28	+4.065	5 06 45.215
Nov. 28 Dec. 2 12 29	112 Tauri β	2 2 2 2	5 5 5 5	5 16 08.22 08.25 08.47 08.54	+4.785 4.857 5.017 .197	5 16 03.435 03.393 03.453 03.343
Means		2				5 16 03.406
Dec. 29	9 Leporis β	4	5	5 21 22.32	+4.001	5 21 18.319
Nov. 28	11 Leporis α	3.4	5	5 25 39.17	+3.738	5 25 35.332

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1838.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1838.
				h. m. s.	s.	h. m. s.
Dec. 2	11 Leporis α	3.4	5	5 25 38.56	+3.798	5 25 34.762
12		3.4	5	39.10	.928	35.172
Means		3.4				5 25 35.089
Dec. 23	46 Orionis ε	2.3	5	5 28 04.02	+4.318	5 27 59.702
Nov. 28	Columbæ α	2	5	5 33 50.92	+3.525	5 33 47.395
Dec. 11		2	5	50.86	.700	47.160
12		2	5	51.07	.710	47.360
23		2	5	51.08	.790	47.290
29		2	5	50.95	.810	47.140
30		2	5	51.02	.810	47.210
Means		2				5 33 47.256
Dec. 2	136 Tauri C	4.5	3	5 43 13.04	+4.121	5 43 08.819
Nov. 28	58 Orionis α	1	5	5 46 27.86	+4.146	5 46 23.714
Dec. 11		1	5	28.68	.377	24.303
12		1	5	28.47	.392	24 078
Means		1				5 46 24.032
Dec. 30	16 Leporis η	4	5	5 49 05.57	+4.055	5 49 01.515
Dec. 2	44 Aurigæ κ	4	5	6 05 08.18	+4.909	6 05 03 271
29		4	5	08.66	5.392	03.268
30		4	5	08.71	.401	03.309
Means		4				6 05 03.283
Dec. 2	13 Geminorum μ	3	5	6 13 14.43	+4.629	6 13 09.801
29		3	5	14.79	5.116	09.674
30		3	5	14.68	.127	09.553
Means		3				6 13 09.679
Dec. 2	27 Geminorum ε	3	5	6 34 02.77	+5.555	6 33 57.215
Dec. 2	9 Canis Major. α	1	5	6 38 04.37	+3.594	6 38 00.776
30		1	5	04.53	4.051	00.479
Means		1				6 38 00.627
Dec. 30	16 Canis Major. o^1	4	5	6 47 28 65	+4.040	6 47 24.610
Dec. 31	21 Canis Major. ε	2.3	5	6 52 19.50	+3.851	6 52 15.649
Dec. 2	42 Geminorum ω^1	6	5	6 52 36.89	+4.619	6 52 32.271
Dec. 30	46 Geminorum τ	5	5	7 00 54.71	+5.510	7 00 49.200
31		5	5	55.02	.527	49.493
Means		5				7 00 49.346
Dec. 30	27 Canis Major. e^1	4.5	5	7 07 43.15	+3.873	7 07 39.277
31		4.5	5	43.03	.872	39.158
Means		4.5				7 07 39.217

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1838.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1838.
				h. m. s.	s.	h. m. s.
Nov. 28	55 Geminorum δ	3.4	5	7 10 30.14	+4.387	7 10 25.753
Dec. 30		3.4	5	31.81	5.143	26.667
31		3.4	5	31.87	.159	26.711
Means		3.4				7 10 26.377
Dec. 31	60 Geminorum ι	4	5	7 15 44.21	+5.473	7 15 38.737
Dec. 4	78 Geminorum β	2	5	7 35 28.35	+4.642	7 35 23.708
31		2	5	28.99	5.335	23.655
Means		2				7 35 23.681
Dec. 31	7 Argus ξ	4	5	7 42 32.70	+3.886	7 42 28.814
Dec. 4	83 Geminorum φ	5	5	7 43 39.09	+4.603	7 43 34.487
Dec. 31	15 Argus	3.4	5	8 00 42.74	+3.842	8 00 38.898
Dec. 31	19 Cancri λ	6	5	8 10 58.63	+5.134	8 10 53.496
Dec. 31	33 Cancri η	6	5	8 23 24.59	+4.956	8 23 19.634
Dec. 5	30 Hydræ α	2	5	9 19 40.87	+3.196	9 19 37.674
Dec. 5	4 Leonis λ	4.5	5	9 22 32.18	+3.938	9 22 28.242
6		4.5	5	31.93	.974	27.956
Means		4.5				9 22 28.099
Dec. 5	16 Leonis ψ	6	5	9 34 57.20	+3.612	9 34 53.588
6		6	5	58.02	.648	54.372
Means		6				9 34 53.980
Dec. 6	32 Leonis α	1	5	9 59 47.93	+3.437	9 59 44.493
Dec. 6	41 Leonis γ	2	5	10 11 05 54	+3.542	10 11 01.998
Dec. 6	47 Leonis ζ	4	5	10 24 20.05	+3.224	10 24 16.826
Dec. 6	50 Ursæ Major. α	1.2	5	10 53 45.04	+4.684	10 53 40.356
Dec. 8	63 Leonis χ	4.5	5	10 56 42.50	+3.012	10 56 39.488
Dec. 8	68 Leonis δ	3	5	11 05 32.10	+3.200	11 05 28.900
Dec. 8	12 Hyd. & Crat. δ	3.4	5	11 11 17.45	+2.632	11 11 14.818
Dec 8	77 Leonis σ	4	5	11 12 50.18	+2.891	11 12 47.289
Dec. 8	Hyd. & Crat.		5	11 26 40.39	+2.224	11 26 38.166
Dec. 8	5 Virginis β	3.4	5	11 42 18.08	+2.725	11 42 15.355
9		3.4	5	18.22	.758	15.462
Means		3.4				11 42 15.408

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1838.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c	Mean AR Jan. 1, 1838.
				h. m. s.	s.	h. m. s.
Dec. 8	7 Virginis b	5.6	5	11 51 41.58	+2.639	11 51 38.941
9		5.6	5	41.74	.674	39.066
Means		5.6				11 51 39.003
Dec. 8	1 Corvi α	4.5	5	12 00 06.46	+2 259	12 00 04.201
9		4.5	5	07.02	.295	04.725
Means		4.5				12 00 04.463
Nov. 22	22 Capricorni η	5	3	20 55 13.22	+2.661	20 55 10.559
Nov. 22	29 Capricorni s	5	5	21 06 48.89	+2.621	21 06 46.279
23		5	5	49.86	.608	47.252
Means		5				21 06 46.765
Nov. 21	5 Cephei α	3	5	21 14 42.32	—0.227	21 14 42.547
22		3	5	42.17	.267	42.437
23		3	5	41.46	.307	41.767
24		3	5	41.90	.317	42.247
Means		3				21 14 42.249
Nov. 21	22 Aquarii β	3	5	21 23 04.09	+2.532	21 23 01.458
Nov. 21	8 Cephei β	3	5	21 26 31.93	—1.219	21 26 33.149
23		3	5	31.37	.339	32.709
24		3	5	31.71	.399	33.109
Means		3				21 26 32.989
Nov. 21	8 Pegasi ε	2.3	5	21 36 15 96	+2.288	21 36 13.672
22		2.3	5	15.88	.300	13.580
Means		2.3				21 36 13.626
Nov. 23	49 Capricorni δ	3.4	5	21 38 07.66	+2.796	21 38 04.864
24		3.4	5	07.20	.783	04.417
Means		3.4				21 38 04.640
Nov. 23	33 Aquarii ι	4.5	5	21 57 43.42	+2.851	21 57 40.569
24		4.5	5	43 03	.840	40.190
Means		4.5				21 57 40.379
Nov. 24	73 Aquarii λ	4	5	22 44 12.28	+2.969	22 44 09.311
Nov. 21	24 Piscis Aus. α	1	5	22 48 45.22	+3.467	22 48 41.753
22		1	5	44 51	.453	41.057
23		1	5	44.67	.439	41.231
24		1	5	44.30	.425	40.875
Means		1				22 48 41.229
Nov. 21	54 Pegasi α	2	5	22 56 44.20	+2.717	22 56 41.483

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1838.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1838.
				h. m. s.	*s.*	*h. m. s.*
Nov. 22	54 Pegasi α	2	5	22 56 44.62	+2.705	22 56 41.915
23		2	5	44.69	.693	41.997
24		2	5	44.09	.681	41.409
Means		2				22 56 41.701
Dec. 23	8 Piscium κ'	5.6	5	23 18 40.80	+2.724	23 18 38.076
Nov. 25	17 Piscium ι	4.5	5	23 31 40.38	+3.028	23 31 37.352
Dec. 23		4.5	5	40.01	2.668	37.342
Means		4.5				23 31 37.347
Nov. 25	35 Cephei γ	3	5	23 32 47.01	+1.389	23 32 45.621
26		3	5	46.91	.313	45.597
Means		3				23 32 45.609
Nov. 25	20 Piscium n	5.6	5	23 39 39.98	+3.175	23 39 36.805
26		5.6	5	40.18	.165	37.015
Means		5.6				23 39 36.910
Nov. 25	29 Piscium q	5	5	23 53 34.48	+3.249	23 53 31.231
26		5	5	34.60	.240	31.360
Means		5				23 53 31.295

APPARENT RIGHT ASCENSION OF THE

MOON'S OBSERVED LIMB.

Date.	Limb observed.	Right ascension.	Date.	Limb observed.	Right ascension.
		h. m. s.			*h. m. s.*
Nov. 21	I	19 40 09.28	Dec. 6	II	10 05 54.16
22	I	20 39 05.39	8	II	11 35 21.23
23	I	21 36 27.54	9	II	12 18 07.00
24	I	22 29 25.58	11	II	13 45 52.65
25	I	23 21 52.92	12	II	14 33 15.82
26	I	0 14 02.92	23	I	23 57 02.60
28	I	2 03 17.86	24	I	0 48 35.47
29	I	3 02 48.33	26	I	2 38 06.23
30	I	4 06 05.47	27	I	3 38 04.97
Dec. 2	II	6 20 39.34	29	I	5 46 54.16
4	II	8 22 53.91	30	II	6 52 59.46
5	II	9 16 30.22	31	II	7 55 16.04

ANNULAR ECLIPSE OF THE SUN, SEPTEMBER 18.

At the first contact, both limbs were sharp and well defined. At formation of the ring, the light appeared to flash round the moon's limb, leaving two distinctly arched portions separated from the cusps, with beads of light in the intervening spaces. This phenomenon continued from one to two seconds. Rupture of the ring same as at first contact. The end of the eclipse could be determined with less accuracy, by reason of light cirri near the horizon, and a tremulous motion of both bodies. At that time, and for some moments before, there was observed between the limbs alternate dark and bright waving lines, as of heated air from an opaque surface.

The telescope used was a 42 inches achromatic, made by Jones, with a green screen glass, and magnifying power 50.

MEAN TIME AT WASHINGTON.

	h.	m.	s.
Beginning of the eclipse - - - - - - - -	3	06	10.4
Formation of the ring - - - - - - - -	4	24	28.4
Rupture of the ring - - - - - - - -	4	30	18.9
End of the eclipse - - - - - - - -	5	39	56.4
Duration of the ring - - - - - - - -		5	50.5
Duration of the eclipse - - - - - - - -	2	33	46.0

The local time was obtained from the following observations during the day, the adjustments of the transit instrument having been carefully examined:

Name of object.	No. of wires observed.	Mean of wires.	Instru'l correction.	Computed time of transit.	Chronometer 2032, fast M. T.
		h. m. s.		h. m. s.	h. m. s.
⊙ 1st L	4	5 00 21.30	None.		5 07 19.09
⊙ 2d L	5	5 02 28.94			
α Cor. Bor.	5	8 45 53.40		3 38 34.30	5 07 19.10
α Herculis	5	10 25 03.50		5 17 44.58	5 07 18.92
δ Ursæ min.	3	11 41 56.10		6 34 38.79	5 07 17.31
γ Aquilæ	4	12 55 57.30		7 48 38.43	5 07 18.87
α Aquilæ	5	13 00 15.30		7 52 56.89	5 07 18.41
β Aquilæ	5	13 04 42.76		7 57 24.83	5 07 17,93
α^2 Capricorni	5	13 26 22.92		8 19 04.05	5 07 18.87

Chronometer rate, — 0s.57.

Meteorological observations during the eclipse.

Time.	Barometer.	Dew point.	Sun thermometer.	Air thermometer.
h. m.	Inches.	°	°	°
3 00	29.784	57.0	109.0	88.4
15	.784		106.0	87.6
30	.776		106.0	85.6
45	.776		95.0	85.2
4 00	.770	56.0	95.0	83.6
15	.754		88.0	80.8
30	.750		82.0	77.8
45	.744		82.0	77.8
5 00	.750	56.0	82.0	78.4
30	.750		79.0	74.4
45	.750		75.0	72.4

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1838.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
1	21 Andromedæ	α	1	3	+28°12′	0 00 01.540	+3.070	+0.398	—0.030
2	8 Ceti	ι	4	2	— 9 43	0 11 09.430	+3.057	—0.666	
3	44 Piscium	ι	6	3	+ 1 02	0 17 05.903	+3.070	+0.293	
4	31 Andromedæ	δ	3	1	+29 58	0 30 40.450	+3.169	+0.118	
5	16 Ceti	β	2.3	4	—18 53	0 35 27.321	+2.999	+0.107	—0.020
6	79 A. S. C.		6	1	+ 4 28	0 39 53.988	+3.086	+2.660	
7	71 Piscium	ε	4	1	+ 7 01	0 54 32.468	+3.106	—0.170	
8	45 Ceti	θ^1	3	1	— 9 01	1 15 55.717	+3.001	+0.175	—0.093
9	98 Piscium	μ	5	1	+ 5 18	1 21 42.378	+3.111	+0.620	
10	99 Piscium	η	4	1	+14 30	1 22 49.202	+3.189	—0.200	
11	101 Piscium		6	1	+13 50	1 27 07.622	+3.189	+1.149	
12	110 Piscium	ο	5	1	+ 8 30	1 36 50.614	+3.148	+0.030	
13	5 Arietis	γ^1	4.5	1	+18 30	1 44 39.062	+3 264	—0.030	
14	59 Ceti	ν^2	4.5	1	—21 52	1 52 21.976	+2.816	+0.088	
15	13 Arietis	α	3	2	+22 42	1 58 03.417	+3.346	+0.561	+0.167
16	22 Arietis	θ^1	6	1	+19 09	2 09 07.528	+3.315	+0.248	
17	27 Arietis	ψ	6	1	+16 59	2 21 56.362	+3.304	+0.760	
18	32 Arietis	ν	5.6	2	+21 15	2 29 38.425	+3.382	+0.939	
19	2 Eridani	τ^2	4.5	1	—21 40	2 48 41.400	+2.720	+0.060	
20	48 Arietis	ε	5	2	+20 42	2 49 57.939	+3.408	+0.515	—0.054
21	92 Ceti	α	2.3	1	+ 3 27	2 53 49.039	+3.126	+0.155	
22	57 Arietis	δ	4	2	+19 07	3 02 22.917	+3.398	+0.503	
23	12 Eridani		3.4	1	—29 38	3 05 11.677	+2.561	—0.281	
24	58 Arietis	ζ	5	1	+20 26	3 05 36.005	+3 427	+0.429	
25	16 Eridani		3.4	1	—22 31	3 12 18.556	+2.659	+0.094	
26	64 Arietis	g	5.6	2	+24 09	3 14 45.322	+3.517	+0.176	
27	17 (Pleiadum)	b	4.5	1	+23 36	3 35 15.827	+3.538	+0.013	
28	25 Tauri	η	3	3	+23 36	3 37 51.575	+3.546	—0.049	—0.375
29	44 Persei	ζ	3.4	1	+31 24	3 43 57.211	+3.742	—0.315	
30	34 Eridani	γ^1	2.3	2	—13 58	3 50 28.265	+2.789	—0.009	—0.169
31	37 Tauri	A^1	5	1	+21 38	3 55 07.301	+3.520	+0.061	
32	102 Tauri	ι	4.5	1	+21 21	4 53 25.191	+3.568	+0.487	
33	2 Leporis	ε	4	1	—22 36	4 58 36.405	+2.532	+0.809	
34	19 Orionis	β	1	1	— 8 24	5 06 45.215	+2.878	+0.077	—0.120
35	112 Tauri	β	2	4	+28 29	5 16 03.406	+3.782	+0.204	+0.018
36	9 Leporis	β	4	1	—20 53	5 21 18.319	+2.565	—0.031	—0.178
37	11 Leporis	α	3.4	3	—17 57	5 25 35.089	+2.642	+0.089	—0.078
38	46 Orionis	ε	2.3	1	— 1 19	5 27 59.702	+3.040	+0.128	+0.076
39	Columbæ	α	2	6	—34 10	5 33 47.256	+2.169	+0.440	
40	136 Tauri	C	4.5	1	+27 33	5 43 08.819	+3.763	+0.335	—0.191
41	58 Orionis	α	1	3	+ 7 22	5 46 24.082	+3.243	—0.076	
42	16 Leporis	η	4	1	—14 12	5 49 01.515	+2.730	+0.175	
43	44 Aurigæ	κ	4	3	+29 33	6 05 03.283	+3.825	+0.673	
44	13 Geminorum	μ	3	3	+22 35	6 13 09.679	+3.626	+0.505	+0.113
45	27 Geminorum	ε	3	1	+25 17	6 33 57.215	+3.693	—0.219	
46	9 Canis Maj.	α	1	2	—16 30	6 38 00.627	+2.646	+0.213	+0.161
47	16 Canis Maj.	o^1	4	1	—23 59	6 47 24.610	+2.486	+1.012	
48	21 Canis Maj.	ε	2.3	1	—28 45	6 52 15.649	+2.356	+0.237	—0.026
49	42 Geminorum	ω^1	6	1	+24 26	6 52 32.271	+3.660	+0.261	
50	46 Geminorum	τ	5	2	+30 30	7 00 49.346	+3.829	+0.354	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1838.

No. for ref.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
51	27 Canis Maj.	ϵ^1	4.5	2	—26°05′	7 07 39.217	+2.443	+0.233	
52	55 Geminorum	δ	3.4	3	+22 16	7 10 26.377	+3.592	+0.017	—0.264
53	60 Geminorum	ι	4	1	+28 07	7 15 38.737	+3.744	—0.675	
54	78 Geminorum	β	2	2	+28 25	7 35 28.681	+3.684	+0.437	—0.024
55	7 Argus	ξ	4	1	—24 28	7 42 28.814	+2.520	—0.036	
56	83 Geminorum	φ	5	1	+27 10	7 43 34.487	+3.686	+0.489	
57	15 Argus		3.4	1	—23 50	8 00 38.898	+2.559	+0.614	+0.032
58	19 Cancri	λ	6	1	+24 31	8 10 53.496	+3.582	+0.270	
59	33 Cancri	η	6	1	+20 59	8 23 19.634	+3 485	—0.046	
60	30 Hydræ	α	2	1	— 7 58	9 19 37.674	+2.950	+0.400	+0.004
61	4 Leonis	λ	4.5	2	+23 41	9 22 28.099	+3.441	+0.161	
62	16 Leonis	ψ	6	2	+14 46	9 34 53.980	+3.277	+0.034	
63	32 Leonis	α	1	1	+12 45	9 59 44.493	+3.222	+0.427	+0.004
64	41 Leonis	γ	2	1	+20 40	10 11 01.998	+3.300	+0.588	
65	47 Leonis	ζ	4	1	+10 09	10 24 16.826	+3.166	+0.358	
66	50 Ursæ Maj.	α	1.2	1	+62 37	10 53 40.356	+3.807	+0.124	—0.009
67	63 Leonis	χ	4.5	1	+ 8 13	10 56 39.488	+3.086	+0.550	
68	68 Leonis	δ	3	1	+21 25	11 05 28.900	+3.194	+0.246	—0.046
69	12 Hyd. & Crat.	δ	3.4	1	—13 54	11 11 14.818	+3.000	+0.104	—0.004
70	77 Leonis	σ	4	1	+ 6 56	11 12 47.289	+3.071	+0.951	
71	Hyd. & Crat.			1	—31 46	11 26 38.166	+2.940		
72	5 Virginis	β	3.4	2	+ 2 41	11 42 15.408	+3.124	+0.236	
73	7 Virginis	b	5.6	2	+ 4 34	11 51 39.003	+3.072	+0.087	
74	1 Corvi	α	4.5	2	−23 49	12 00 04.463	+3.067	+0.407	
75	22 Capricorni	η	5	1	—20 30	20 55 10.559	+3.430	—0 091	
76	29 Capricorni	s	5	2	—15 50	21 06 46.765	+3.329	—0.387	
77	5 Cephei	α	3	4	+61 54	21 14 42.249	+1.417	+0.677	—0.068
78	22 Aquarii	β	3	1	— 6 17	21 23 01.458	+3.163	+0.008	—0.132
79	8 Cephei	β	3	3	+69 51	21 26 32.989	+0.809	+1.439	+0.398
80	8 Pegasi	ε	2.3	2	+ 9 08	21 36 13.626	+2.944	—0.018	—0.218
81	49 Capricorni	δ	3.4	2	—16 51	21 38 04.640	+3.304	—0.602	
82	33 Aquarii	ι	4.5	2	—14 39	21 57 40.379	+3.247	—0.587	
83	73 Aquarii	λ	4	1	— 8 26	22 44 09.311	+3.133	+0.117	
84	24 Piscis Aus.	α	1	4	—30 29	22 48 41.229	+3.311	+0.401	
85	54 Pegasi	α	2	4	+14 20	22 56 41.705	+2.977	+0.187	+0.132
86	8 Piscium	κ^1	5.6	1	+ 0 22	23 18 38.076	+3.067	+1.270	—0.090
87	17 Piscium	ι	4.5	2	+ 4 45	23 31 37.347	+3.057	+0.355	
88	35 Cephei	γ	3	2	+76 44	23 32 45.609	+2.398	+1.657	+0.195
89	20 Piscium	n	5.6	2	— 3 40	23 39 36.910	+3.076	+0.910	—0.044
90	29 Piscium	q	5	2	— 3 56	23 53 31.295	+3.071	+0.757	

ASTRONOMICAL OBSERVATIONS AT WASHINGTON.

1839.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 23	π Arietis	5	+16°47′	15.0	41.3	2 41 07.6	34.0	0.3
2		τ^2 Eridani	4.5	—21 44	40.3	7.1	2 44 33.0	59.8	26.1
3		ε Arietis	5	+20 42	57.0	23.0	2 50 49.0	15.3	41.3
4		δ Arietis	4	+19 07	22.5	48.5	3 03 14.0	40.0	6.0
5		16 Eridani	3.4	—22 22	18.0	44.5	3 13 10.5	36.7	3.5
6		Moon I	(8.4)	+22 43	54.1	21.4	3 18 48.0	15.5	42.0
7		ε Eridani	4	—10 01	20.2	45.3	3 26 09.8	34.5	59.5
8		b Pleiadum	4.5	+23 36	14.5	41.2	3 36 07.8	34.5	1.5
9		η Tauri	3	+23 36	50.5	17.2	3 38 43.5	10.2	37.2
10		ζ Persei	3.4	+31 24	52.0	21.0	3 44 49.3	17.8	46.5
11		A^1 Tauri	5	+21 38	7.0	33.5	3 55 59.5	25.5	52.2
12	24	b Pleiadum	4.5	+23 36	16.5	43.5	3 36 09.8	36.2	3.0
13		η Tauri	3	+23 36	52.5	19.5	3 38 45.7	12.0	39.0
•14		ζ Persei	3.4	+31 24	54.5	23.0	3 45 51.5	20.0	48.5
15		A^1 Tauri	5	+21 38	9.1	35.5	3 56 01.5	27.5	54.0
16		o Eridani	4.5	— 7 16	2.0	26.5	4 04 51.0	15.5	40.0
17		γ Tauri	3.4	+15 14	38.2	3.5	4 11 28.7	53.8	19.0
•18		δ^2 Tauri	4.5	+17 04	39.0	4.5	4 14 29.5	54.7	20.5
19		Moon I	(9.4)	+26 20	58.0	26.2	4 19 53.8	22.0	50.0
20		τ Tauri	5	+22 39	33.0	59.6	4 38 25.5	52.0	18.5
21		q Orionis	4	+ 6 40	7.5	32.5	4 41 56.5	21.0	46.0
22		ι Tauri	4.5	+21 21	26.0	52.0	4 54 18.5	45.2	11.2
23		ε Leporis	4	—22 35	37.2	3.6	4 59 29.8	56.2	22.5
24	26	β Tauri	2	+28 28	5.1	33.0	5 17 00.6	28.1	56.0
25		l Aurigæ	5	+30 23	15.1	43.5	5 29 11.5	39.8	8.3
26		α Columbæ	2	—34 10	45.0	14.5	5 34 43.8	13.5	43.2
27		C Tauri	4.5	+27 34	11.5	39.0	5 44 06.2	33.5	1.2
28		η Leporis	4	—14 12	8.0	33.2	5 49 58.0	23.5	48.5
29		κ Aurigæ	4	+29 31	4.5	33.0	6 06 00.7	28.8	57.0
30		μ Geminor.	3	+22 36	14.0	40.5	6 14 07.0	33.5	0.0
31		Moon I	(11.5)	+28 18	6.5	35.0	6 27 03.4	31.8	0.5
32		γ Geminor.	3	+16 32	27.5	53.0	6 29 18.2	43.6	9.5
33		ε Geminor.	3	+25 17	1.8	28.5	6 34 55.0	22.2	49.5
34		α Canis Maj.	1	—16 30	6.5	31.8	6 38 57.2	22.8	48.5
35		ε Canis Maj.	2.3	—28 45	17.0	45.0	6 53 12.6	40.5	8.5
36		τ Geminor.	5	+30 30	50.8	19.5	7 01 47.5	15.5	44.0
37	30	ε Leonis	3	+24 31	55.0	22.0	9 37 48.5	15.0	42.2
38		μ Leonis	3	+26 46	48.0	15.2	9 44 42.4	9.2	36.5
39		Moon II	(15.7)	+13 44	23.5	49.0	10 12 14.4	40.0	5.6
40	Feb. 2	β Virginis	3.4	+ 2 40	56.0	20.5	11 43 45.0	9.5	34.0
41		o Virginis	4.5	+ 9 38	37.5	2.5	11 58 27.0	51.6	16.5
42		α Corvi	4.5	—23 50	41.5	7.5	12 01 34.0	0.5	27.5
43		Mars, (cent.)		+ 3 12	4.5	29.5	12 07 53.5	17.5	42.5
44		η Virginis	3.4	+ 0 14	18.0	42.5	12 13 06.9	31.0	56.0
45		α Comæ Ber.	4.5	+27 43	27.5	55.2	12 20 22.5	50.0	17.5
46		Moon II	(18.7)	— 3 40	15.0	40.0	12 26 04.5	29.5	54.5
47		β Corvi	2.3	—22 30	30.5	57.0	12 27 23.2	49.4	16.0
48		γ^1 Virginis	4	— 0 34	8.0	32.7	12 34 56.8	21.0	45.7
49		ψ Virginis	5.6	— 8 40	35.5	1.5	12 47 25.5	50.5	15.5

January 23.—No error of level or collimation; azimuth —1s.20 (West.)
February 2.—Examined adjustments of the transit; azimuth — 0s.87.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
2	41	07.64	— .468			+0	47.14	+2.00	2	40	20.03	1
2	44	33.26	—1.127				.15		2	43	44.98	2
2	50	49.12	— .400				.16		2	50	01.56	3
3	03	14.20	— .432				.17		3	02	26.60	4
3	13	10.64	—1.137				.19		3	12	22.31	5
3	18	48.20	— .376				.19		3	18	00.63	6
3	26	09.86	— .918				.20		3	25	21.74	7
3	36	07.90	— .347				.21		3	35	20.34	8
3	38	43.72	— .347	+0	47.11		.22		3	37	56.15	9
3	44	49.32	— .184				.23		3	44	01.91	10
3	55	59.54	— .385			+0	47.24	+2.00	3	55	11.92	11
3	36	09.80	— .347			+0	49.09	+1.90	3	35	20.36	12
3	38	45.74	— .347	+0	49.14		.09		3	37	56.30	13
3	44	51.50	— .184				.10		3	44	02.22	*14
3	56	01.52	— .385				.12		3	55	12.02	15
4	04	51.00	— .872				.13		4	04	01.00	16
4	11	28.64	— .498				.14		4	10	39.00	17
4	14	29.64	— .468				.14		4	14	40 03	*18
4	19	54.00	— .287				.15		4	19	04.56	19
4	33	25.72	— .365				.15		4	32	36.21	20
4	41	56.70	— .644				.17		4	41	06.89	21
4	54	18.58	— .384				.19		4	53	29.01	22
4	59	29.86	—1.141			+0	49.20	+1.90	4	58	39.52	23
5	17	00.56	— .256	+0	51.72	+0	51.69	+1.23	5	16	08.61	24
5	29	11.64	— .211				.70		5	28	19.73	25
5	34	44.00	—1.445		51.71		.71		5	33	50.85	26
5	44	06.28	— .277				.72		5	43	14.28	27
5	49	58.21	—1.030				.72		5	49	05.49	28
6	06	00.80	— .234				.73		6	05	08.84	29
6	14	07.00	— .379		51.80		.74		6	13	14.88	30
6	27	03.44	— .256				.75		6	26	11.43	31
6	29	18.36	— .496				.75		6	28	26.11	32
6	34	55.40	— .322				.76		6	34	03.32	33
6	38	57.36	—1.072		51.67		.76		6	38	04.53	34
6	53	12.72	—1.317	+0	51.78		.77		6	52	19.63	35
7	01	47.46	— .211			+0	51.78	+1.23	7	00	55.44	36
9	37	48.54	— .313	+1	04.08	+1	03.75	+2.90	9	36	44.48	37
9	44	42.26	— .269				.77		9	43	38.22	38
10	12	14.50	— .522			+1	03.88	+2.90	10	11	10.15	39
11	43	45.00	— .514			+1	24.50	+6.72	11	42	19.99	40
11	58	27.02	— .435				.57		11	57	02.02	41
12	01	34.20	— .844				.58		12	00	08.78	42
12	07	53.50	— .511				.61		12	06	28.38	43
12	13	06.88	— .540				.64		12	11	41.70	44
12	20	22.54	— .191				.67		12	18	57.68	45
12	26	04.70	— .585				.70		12	24	39.42	46
12	27	23.22	— .830	+1	24.86		.71		12	25	57.68	47
12	34	56.84	— .554				.74		12	33	31.55	48
12	47	25.70	— .654			+1	24.80	+6.72	12	46	00.25	49

No. 14. Recorded 3*h* 45*m*. at transit over III wire.
18. This is evidently 10*s*. too little at each wire.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	Feb 2	Jupiter I		— 6°00′	53.0	17.0	13 12 41.2	5.0	29.5
2	cont'd.	η Bootis	3	+19 12	35.5	1.5	13 48 27.0	53.0	19.0
3	3	β Corvi	2.3	—22 30	34.8	1.5	12 27 27.5	54.0	20.5
4		γ^1 Virginis	4	— 0 34	12.5	37.0	12 35 01.5	25.5	50.0
5		ψ Virginis	5.6	— 8 40	41.0	5.5	12 47 30.0	54.8	19.5
6		ψ Hydræ con.	4.5	—22 15	2.0	28.6	13 01 54.5	21.0	47.5
7		Moon II	(19.8)	— 9 21	40.7	6.0	13 09 31.2	56.5	21.8
8		α Virginis	1	—10 19	24.5	49.5	13 18 14.0	38.6	3.5
9		O Virginis	6	—11 43	3.2	28.0	13 38 52.7	17.6	42.8
10		x Virginis	5.6	—17 19	47.9	13.5	13 42 38.8	4.5	30.1
11		η Bootis	3	+19 12	40.2	6.0	13 48 31.9	57.7	23.7
12	4	α Columbæ	2	—34 09	24.0	53.5	5 35 22.5	52.0	21.8
13		α Orionis	1	+ 7 22	12.0	36.5	5 48 01.0	25.5	50.0
14		α Virginis	1	—10 19	26.8	51.8	13 18 16.5	41.1	6.2
15		O Virginis	6	—11 43	5.0	30.1	13 38 55.0	19.7	45.0
16		x Virginis	5.6	—17 19	50.0	15.5	13 42 41.0	6.5	32.3
17		η Bootis	3	+19 12	43 0	8.7	13 48 31.5	1.1	26.2
18		Moon II	(20.8)	—14 42	24.6	50.5	13 54 16.5	42.5	7.5
19		π Hydræ con.	4.5	—25 52	52.0	19.2	13 58 46.5	13.8	40.3
20		α Bootis	1	+20 01	0.5	26.7	14 09 52.5	18.0	44.5
21		λ Virginis	4	—12 38	7.3	32.8	14 11 57.5	22.5	47.8
22		ε Bootis	3	+27 45	35.5	3.0	14 39 30.6	58.1	25 7
23		α^2 Libræ	3	—15 22	41.5	6.5	14 43 32.2	57.2	22.6
24		1690 A. S. C.	6	—20 39	45.5	11.6	14 49 37.7	3.5	29.5
25		20 Libræ	3.4	—24 39	19.0	46.2	14 56 12.8	39.3	6.3
26	6	1690 A. S. C.	6	—20 39	50.5	17.0	14 49 43.0	9.0	35.0
27		20 Libræ	3.4	—24 39	24.6	51.5	14 56 18.0	44.6	11.5
28		ι^1 Libræ	5.6	—19 11	50.0	16 0	15 04 41.7	7.2	33.2
29		β Cor. Bor.	4	+29 40	53.0	21.0	15 22 49.3	17.0	45.5
30		α Cor. Bor.	2	+27 15	35.5	2.8	15 29 30.0	57.2	25.0
31		Moon II	(22.9)	—23 35	19.5	36.5	15 32 04.0	31.5	58.5
32		b Scorpii	5	—25 15	2.5	29.5	15 42 56.5	23.5	50.0
33		δ Scorpii	3	—22 09	34.5	1.0	15 52 27.5	53.5	20.0
34		β^1 Scorpii	2	—19 22	51.2	17.0	15 57 43.0	8.7	34.5
35	19	Moon I	(5.8)	+21 30	11.9	39.1	3 01 06.2	32.5	59.2
36		b Pleiadum	4.5	+23 36	49.7	16.5	3 36 43.0	9.5	36.4
37		η Tauri	3	+23 36	25.0	52.5	3 39 19.0	45.5	12.4
38		ζ Persei	3.4	+31 24	28.0	56.5	3 45 25.5	53.5	22.5
39		γ^1 Eridani	2.3	—13 58	4.0	29.5	3 51 54.8	20.0	45.4
40		β Tauri	2	+28 28	36.0	4.0	5 17 32.0	59.5	27.0
41		α Columbæ	2	—34 10	15.0	44.5	5 35 14.0	43.5	13.0
42	21	γ Tauri	3	+15 14	10.6	36.2	4 12 01.5	26.7	52.0
43		υ^1 Tauri	5	+22 27	11.2	37.8	4 18 04.2	30.5	57.0
44		ε Tauri	4	+18 49	45.0	10.7	4 20 36.7	2.2	28.2
*45		α Tauri	1	+16 11	13.9	39.3	4 28 04.7	29.9	55.5
46		τ Tauri	5	+22 39	5.7	32.3	4 33 58.8	25.0	51.5
47		q Orionis	4	+ 6 40	40.5	5.0	4 42 29.5	54.0	18.6
48		z Orionis	4.5	+ 2 11	26.7	51.0	4 47 15.5	39.7	4.5

February 3.--Examined the collimation and level adjustments.
4.--Examined the collimation and level.
13.--Lengthened the pendulum three divisions.
19.--Examined adjustments of the transit at 4 p. m.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
13	12	41.14	— .620			+1	24.92	+6.72	13	11	16.96	*1
13	48	27.20	— .315	+1	24.69	+1	25.09		13	47	01.80	2
12	27	27.66	— .980	+1	29.12	+1	29.11	+3.72	12	25	57.57	3
12	35	01.30	— .654				.13		12	33	31 52	4
12	47	30.16	— .769				.16		12	46	00.23	5
13	01	54.72	— .974				.20		13	00	24.55	6
13	09	31.24	— .768				.21		13	08	01.26	7
13	18	14.02	— .793		29.19		.23		13	16	44.00	8
13	38	52.86	— .812				.28		13	37	22.77	9
13	42	38.96	— .897				.29		13	41	08.77	10
13	48	31.90	— .367	+1	29.31	+1	29 30	+3.72	13	47	02.23	11
5	35	22.76	+ .139	+1	32.19	+1	31.31	+2.92	5	33	51.59	12
5	48	01.00	+ .064		32.26		.34		5	46	29 72	13
13	18	16.48	+ .092		32.50		32.39		13	16	44.18	14
13	38	54.96	+ .094				.44		13	37	22.61	15
13	42	41.06	+ .104				.45		13	41	08.71	16
13	48	34.70	+ .043		32.49		.45		13	47	02 29	17
13	54	16.32	+ .098				.46		13	52	43.96	18
13	58	46.36	+ .121				.48		13	57	14.00	19
14	09	52.44	+ .040		32.42		.50		14	08	19.98	20
14	11	57.58	+ .096				.51		14	10	25.17	21
14	39	30.58	+ .026		32.51		.58		14	37	58.03	22
14	43	32.00	+ .100	+1	32.58		.58		14	41	59.56	33
14	49	37.56	+ .110				.60		14	48	05.07	24
14	56	12.72	+ .118			+1	32.61	+2.92	14	54	40.23	25
14	49	42.90	— .276			+1	37.22	+2 34	14	48	05.40	26
14	56	18.04	— .295				.23		14	54	40.53	27
15	04	41.62	— .268				.25		15	03	04.10	28
15	22	49.16	— .055				.28		15	21	11.83	29
15	29	30.10	— .068	+1	37.30		.29		15	27	52.74	30
15	32	04.10	— .288				.30		15	30	26.51	31
15	42	56.40	— .298				.31		15	41	18.79	32
15	52	27.30	— .283				.32		15	50	49.70	33
15	57	42.88	— .270	+1	37.33	+1	37.33	+2.34	15	56	05.28	34
3	01	05.78	— .065			+1	23.12	0.00	2	59	42.60	35
3	36	43.02	— .057				.12		3	35	19.84	36
3	39	18.88	— .057	+1	22.95		.12		3	37	55.70	37
3	45	25.20	— .029				.12		3	43	02.05	38
3	51	54.74	— .164		22.80		.12		3	50	31.46	39
5	17	31.70	— .041		23.37		.12		5	16	08.54	40
5	35	14.00	— .231	+1	23.34	+1	23.12	0.00	5	33	50.65	41
4	12	01.40	+ .207			+1	22.83	—0.20	4	10	38.36	42
4	18	04.14	+ .152				.83		4	16	41.16	43
4	20	36.56	+ .186				.83		4	19	13.54	44
4	28	04.66	+ .201	+1	22.82		.83		4	26	41.63	*45
4	33	58.66	+ .151				.83		4	32	35.68	46
4	42	29.44	+ .268				.83		4	41	06.34	47
4	47	15.48	+ .298			+1	22.83	—0.20	4	45	52 35	48

No. 1. Sidereal time of semidiameter passing the meridian + 1*s*.34.
45. Recorded 4*h*. 27*m*. at transit over III wire.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Feb. 21	ι Tauri	4.5	+21°21′	59.6	26.0	4 54 52.1	18.2	44.7
2	cont'd.	ε Leporis	4	—22 35	9.5	36.0	5 00 02.5	28 5	55.0
3		Moon I	(7.9)	+28 01	35.2	3.8	5 04 32.2	0.5	28.8
4		λ Leporis	4.5	—13 20	43.0	8.0	5 13 32.7	58.0	23.0
5		β Tauri	2	+28 28	36.0	3.5	5 17 31.0	58.5	26.2
6	March 1	β Virginis	3.4	+ 2 40	17.2	41.5	11 44 15.7	40.0	4.4
7		ο Virginis	4.5	+ 9 37	8.5	33.2	11 58 58.0	22.5	47.5
8		α Corvi	4.5	—23 50	11.5	38 0	12 02 04.5	31.2	58 0
9		Moon II	(16.2)	— 1 29	4.5	29.8	12 09 54.5	19.0	44.0
10		η Virginis	3.4	+ 0 14	49.8	14.0	12 13 38.0	2.0	26.5
11		α Comæ Ber.	4.5	+27 43	58.5	26 2	12 20 54.0	21.4	48.8
12		q Virginis	5.6	— 8 34	36.5	1.0	12 27 25.7	50.2	15.0
13	3	δ Virginis	3.4	+ 4 16	51 2	16.2	12 49 40.5	5.0	29.5
14		ε Virginis	3.4	+11 49	31.4	56.0	12 56 21.0	45.8	10 5
15		θ Virginis	4.5	— 4 41	59 5	23.8	13 03 48.5	12.7	37 0
16		α Virginis	1	—10 19	4.5	29.5	13 18 54.3	19.0	43.5
17		ζ Virginis	4	+ 0 13	51.0	16.5	13 28 40.5	4.5	29.5
18		Moon II	(18.2)	—12 49	36.0	1.6	13 37 27.0	52 5	18.1
19		x Virginis	5.6	—17 20	28.2	54.0	13 43 19 3	44.5	10.2
20		η Bootis	3	+19 12	21.0	46.5	13 49 12.5	38.0	4.5
21		τ Virginis	4.5	+ 2 18	49.8	14.5	13 55 38.7	3.0	27.5
22		π Hydræ con.	4.5	—25 54	30.5	57.5	13 59 24.5	51.5	18.7
23		κ Virginis	4	— 9 32	40.5	5.5	14 06 30.0	54.5	19.5
24		α Bootis	1	+20 01	38.5	4.5	14 10 30.5	56.5	22.5
25		ε Bootis	3	+27 45	13.5	41.5	14 40 08.8	36.4	4.2
26		α^2 Libræ	3	—15 22	19.0	44.6	14 44 10.0	35.3	0.8
27	4	x Virginis	5.6	—17 20	33.5	59.8	13 43 25.0	50.5	16.0
28		η Bootis	3	+19 12	26.8	53.0	13 49 19.2	44.5	10.8
29		τ Virginis	4.5	+ 2 18	56.5	20.5	13 55 45.2	19.2	33.5
30		π Hydræ con.	4.5	—25 54	36.8	4.0	13 59 31.2	58.0	25.0
31		κ Virginis	4	— 9 32	46.8	11.5	14 06 36.5	1.0	26.2
32		α Bootis	1	+20 01	45.2	11.2	14 10 37.2	3.2	29.2
33		Moon II	(19.2)	—17 51	40.0	6.5	14 23 32.6	58.5	24.5
34		ρ Bootis	4	+31 04	14.5	43.2	14 27 11.5	39.8	8.5
35		π Bootis	3.4	+17 06	36.5	2.2	14 35 27.8	53.0	18.5
36		ε Bootis	3	+27 45	20.2	48.2	14 40 15.6	42.8	10.5
37		α^2 Libræ	3	—15 22	26.0	51.5	14 44 16.5	41.5	7.5
38		1690 A. S. C.	6	—20 40	33.0	58.5	14 50 24.1	49.6	15.0
39		20 Libræ	3.4	—24 39	3.5	30.7	14 56 57.5	24.0	51.0
40	5	α^2 Libræ	3	—15 22	29.5	55.0	14 44 20.2	45.2	11.2
41		1690 A. S. C.	6	—20 40	34.5	0.5	14 50 26.5	52.5	19.0
42		20 Libræ	3.4	—24 39	8.0	34.7	14 57 01.7	28.2	55.5
43		ι^1 Libræ	5.6	—19 11	33.6	59.5	15 05 25.5	51.0	17.0
44		Moon II	(20.3)	—22 12	29.2	56.6	15 12 23.5	50.5	17.5
45		β Cor. Bor.	4	+29 34	37.8	6.0	15 23 34.0	2.0	30.0
46		γ^1 Libræ	4.5	—14 15	2.5	27.5	15 28 53.3	18.5	44.0
47		η Libræ	4.5	—15 09	32.8	58.0	15 37 23.5	48.5	14.0
48		b Scorpii	5	—25 35	46.5	13.3	15 43 40.3	7.0	34.0

March 3.—Examined the instrumental adjustments.
7.—No error in level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
4	54	52.12	+ .161			+1	22.83	—0.20	4	53	29.45	1
5	00	02.30	+ .475				.84		4	58	39.93	2
5	04	32.10	+ .097				.84		5	03	09.36	3
5	13	32.94	+ .406				.84		5	12	10.51	4
5	17	31.04	+ .102	+1	22.88	+1	22.84	—0.20	5	16	08.30	5
11	44	15.76	+ .295			+1	55.92	+4.00	11	42	20.13	6
11	58	57.94	+ .245				.96		11	57	02.22	7
12	02	04.64	+ .476				.97		12	00	09.15	8
12	09	54.40	+ .324				.98		12	07	58.74	9
12	13	38.06	+ .315				.99		12	11	42.38	10
12	20	53.78	+ .109				56.00		12	18	57.89	11
12	27	25.68	+ .372			+1	56.01	+4.00	12	25	30.04	12
12	49	40.48	+ .284			+2	09.63	+4.30	12	47	31.13	13
12	56	20.94	+ .232				.65		12	54	11.52	14
13	03	48.30	+ .346				.68		13	01	38.97	15
13	18	54.16	+ .385	+2	09.78		.72		13	16	44.82	16
13	28	40.40	+ .315				.75		13	26	30.96	17
13	37	27.04	+ .400				.78		13	35	17.66	18
13	43	19.24	+ .435				.80		13	41	09.88	19
13	49	12.50	+ .186		09.68		.81		13	47	02.88	20
13	55	38.70	+ .297				.84		13	53	29.16	21
13	59	24.54	+ .503				.85		13	57	15.19	22
14	06	30.00	+ .379				.86		14	04	20.52	23
14	10	30.50	+ .177		09.83		.87		14	08	20.81	24
14	40	08.88	+ .109		10.06		.97		14	37	59.02	25
14	44	09.94	+ .420	+2	10.00	+2	09.98	+4.30	14	42	00.38	26
13	43	24.96	+ .399			+2	16.30	+6.50	13	41	09.06	27
13	49	18.86	+ .163	+2	15.99		.33		13	47	02.69	28
13	55	44.98	+ .272				.36		13	53	28.99	29
13	59	31.00	+ .461				.38		13	57	15.08	30
14	06	36.40	+ .347				.40		14	04	20.35	31
14	10	37.20	+ .158		16.49		.43		14	08	20.93	32
14	23	32.42	+ .402				.48		14	21	16.34	33
14	27	11.50	+ .074				.50		14	24	55.07	34
14	35	27.60	+ .179				.55		14	33	11.23	35
14	40	15.46	+ .100		16.61		.57		14	37	58.99	36
14	44	16.60	+ .387	+2	16.61		.58		14	42	00.41	37
14	50	24.04	+ .422				.61		14	48	06.85	38
14	56	57.34	+ .452			+2	16.63	+6.50	14	54	41.16	39
14	44	20.22		+2	19.80	+2	20.28	+3.70	14	41	59.94	40
14	50	26.60					.30		14	48	06.30	41
14	57	01.62					.32		14	54	41.30	42
15	05	25.32					.34		15	03	04.98	43
15	12	23.46					.35		15	10	03.11	44
15	23	33.96					.38		15	21	13.58	45
15	28	53.16					.39		15	26	32.77	46
15	37	23.36					.41		15	35	02.95	47
15	43	40.22				+2	20.42	+3.70	15	41	19.80	48

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.		Mag.	Declination.	I.	II.	III.	IV.	V.
						s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Mar. 24	6	Cancri	5.6	+28°14′	57.1	24.8	7 53 52.3	19.5	47.5
2		15	Argus	3.4	—23 51	2.5	29.1	8 00 56.0	22.6	49.0
3		β	Cancri	4	+ 9 41	11.8	36.7	8 08 01.5	26.0	50.8
4		λ	Cancri	6	+24 31	18.5	45.5	8 11 12.2	38.5	5.7
5		θ	Cancri	5 6	+18 38	40.0	15.5	8 22 41.5	7.5	33.5
6		γ	Cancri	5	+22 02	20 0	46.2	8 34 12.5	38.7	5.2
7			Moon I	(9.5)	+22 02	41 2	8.0	8 44 34.8	1.5	28.5
8		ξ	Cancri	5.6	+22 42	28.5	55.0	9 00 21.0	47.0	13.5
9		θ	Hydræ	4.5	+ 2 59	25.0	49.5	9 06 13.7	38.0	2.5
10		*q*	Cancri	6	+18 23	23.0	48.8	9 10 14.3	39.5	5.5
11	25	ζ	Hydræ	4	+ 6 33	20.5	45.1	8 47 09.7	34.0	58.5
12		ξ	Cancri	5.6	+22 42	30.0	56.7	9 00 22.9	49.2	15.5
13		θ	Hydræ	4.5	+ 2 59	27.0	51.6	9 06 16.0	40.0	4.5
14		*q*	Cancri	6	+18 23	24.5	50.7	9 10 16.4	42.0	7.7
15		λ	Leonis	4.5	+23 40	55.7	22.5	9 22 49.0	15.3	42.0
16			Moon I	(10.5)	+17 23	44.1	10.5	9 35 36.5	2.2	28.5
17		μ	Leonis	3	+26 46	58.9	26.2	9 43 53.5	20·3	47.8
18		ν	Leonis	5.6	+13 13	0.7	25.5	9 49 50.8	15.5	40.7
19		η	Leonis	3.4	+17 33	59.5	25.0	9 58 50.6	15.5	41.5
20		λ²	Hydræ	4.5	—11 33	11.6	36.5	10 03 01.5	26.0	51.2
21	26	μ	Leonis	3	+26 46	0.0	27.5	9 43 55.0	22.2	49.5
22		ν	Leonis	5.6	+13 13	2.4	27.2	9 49 52.5	17.2	42.4
23		η	Leonis	3.4	+17 33	0.9	26.5	9 58 52.2	17.5	43.5
24		λ²	Hydræ	4.5	—11 33	13.2	38.0	10 03 03.2	28.0	53.0
25		ζ	Leonis	4.5	+24 13	9.5	36.5	10 08 03.1	29.7	56.5
26		μ	Hydræ	4	—16 01	46.5	11.9	10 18 37.3	2.5	28.2
27			Moon I	(11.5)	+12 07	14.2	39.6	10 23 05.1	30.1	55.7
28		ς	Leonis	4	+10 08	48.5	14.0	10 24 38.8	3.5	28.5
29		*l*	Leonis	6	+11 24	17.0	41.8	10 41 06.8	31.5	56.5
30	27	μ	Hydræ	4	—16 01	48.0	13.1	10 18 38.3	3.7	29.5
31		ς	Leonis	4	+10 08	50.8	15.5	10 24 40.5	5.0	30.0
32		*l*	Leonis	6	+11 24	18.5	43.3	10 41 08.2	33.0	57.9
33		54	Leonis	4.5	+25 36	20.1	47.2	10 47 14.4	41.2	8.5
34		α	Hyd. & Crat.	4	—17 27	25.0	50.8	10 52 16.5	42 0	7.5
*35		β	Hyd. & Crat.	4	—21 57	13.0	39.2	11 04 05.5	31.5	58.0
36			Moon I	(12.5)	+ 6 25	9.8	35.0	11 08 00.0	24.8	49.8
*37			Mars 1st		+ 9 02		41.5	11 11 06.2	30.8	
38		σ	Leonis	4	+ 6 55	21.5	46.0	11 13 11.0	35.5	0.0
39		γ	Hyd. & Crat.	4	—16 48	20.0	45.5	11 17 11.0	36.5	2.0
40		υ	Leonis	4.5	+ 0 04	14.0	38.5	11 29 03.0	27.2	52.0
41		ζ	Hyd. & Crat.	4	—17 28	6.0	31.5	11 36 57.0	22.5	48.2
42	30	β	Corvi	2.3	—22 30	35.7	2.0	12 26 28.5	54.8	21.5
43		ψ	Virginis	5.6	— 8 40	41.5	6.5	12 46 31.0	55.5	20.0
44		36	Comæ Ber.	4.5	+18 17	38.3	4.0	12 51 30.0	55.5	21.2
45		θ	Virginis	4.5	— 4 41	19.8	44.5	13 02 09.0	33.0	58.0
46		α	Virginis	1	—10 19	25.5	50.5	13 17 15.2	39.8	4.5
47			Moon II	(15.6)	—10 56	20.5	56.0	13 20 21.5	46.5	12.1
48		ζ	Virginis	4	— 0 24	12.8	37.2	13 27 01.6	25.5	50.3
49		*m*	Virginis	5.6	— 7 53	53.0	17.5	13 33 42.0	6.5	31.1

March 7.—Examined transit adjustments.
30.—Collimation and level correct at 4 P. M.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	sec.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
7	53	52.24	+ .125			+0	13.69	+1.70	7	53	38.67	1
8	00	55.84	+ .582	+0	13.89		.70		8	00	42.72	2
8	08	01.36	+ .296				.71		8	07	47.95	3
8	11	12.08	+ .163				.71		8	10	58.53	4
8	22	41.60	+ .220				.72		8	22	28.10	5
8	34	12.52	+ .177				.73		8	33	58.97	6
8	44	34.80	+ .177				.74		8	44	21.24	7
9	00	21.00	+ .181				.76		9	00	07.42	8
9	06	13.74	+ .352				.77		9	06	00.32	9
9	10	14.22	+ .222			+0	13.78	+1.70	9	10	00.66	10
8	47	09.56	+ .329			+0	15.51	+1.80	8	46	54.38	11
9	00	22.86	+ .181				.53		9	00	07.51	12
9	06	15.82	+ .352				.53		9	06	00 64	13
9	10	16.26	+ .222				.54		9	10	00.94	14
9	22	48.90	+ .171				.55		9	22	33.52	15
9	35	36.36	+ .230				.56		9	35	21.03	16
9	43	53.34	+ .148				.58		9	43	37.91	17
9	49	50.64	+ .267				.59		9	49	35.32	18
9	58	50.42	+ .235				.60		9	58	35.05	19
10	03	01.36	+ .472			+0	15.60	+1.80	10	02	46.23	20
9	43	54.84	+ .213			+0	17.46	+1.80	9	43	37.59	21
9	49	52.34	+ .401				.47		9	49	35.27	22
9	58	52.12	+ .346				.49		9	58	34.98	23
10	03	03.10	+ .707				.49		10	02	46.32	24
10	08	03.06	+ .251				.50		10	07	45.81	25
10	18	37.28	+ .766				.50		10	18	20.55	26
10	23	01.94	+ .403				.51		10	22	47.83	27
10	24	38.66	+ .441				.51		10	24	21.59	28
10	41	06.72	+ .425			+0	17.52	+1.80	10	40	49.62	29
10	18	38.52	+ .898			+0	19.49	+2.00	10	18	19.93	30
10	24	40.36	+ .512				.50		10	24	21.37	31
10	41	08.18	+ .495				.52		10	40	49.15	32
10	47	14.28	+ .302				.53		10	46	55.05	33
10	52	16.36	+ .916				.54		10	51	57.74	34
11	04	05.44	+ .989				.54		11	03	46.89	*35
11	07	59.88	+ .569				.55		11	07	40.90	36
11	11	06.17	+ .530				.56		11	10	47.57	*37
11	13	10.80	+ .559				.56		11	12	51.80	38
11	17	11.00	+ .906				.57		11	16	52.34	39
11	29	02.94	+ .659				.58		11	28	44.02	40
11	36	57.04	+ .917			+0	19.59	+2.00	11	36	38.37	41
12	26	28.50	— .547	+0	29.46	+0	29.24	+5.30	12	25	58.71	42
12	46	30.90	— .433				.32		12	46	01.15	43
12	51	29.80	— .218				.34		12	51	00.25	44
13	02	08.86	— .397				.37		13	01	39.09	45
13	17	15.10	— .432	+0	29.47		.43		13	16	45.24	46
13	20	21.32	— .448				.44		13	19	51.43	47
13	27	01.48	— .362				.46		13	26	31.66	48
13	33	42.02	— .422			+0	29.49	+5.30	13	33	12.11	49

No. 35. This is No. 11 Hyd. & Crat. of Flamstead.
37. Sidereal time semidiameter passing the meridian 0s.43.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 30	O Virginis	6	—11°37′	4.0	29.5	13 37 54.0	18.6	44.0
2	cont'd.	k Centauri	4.5	—32 11	8.5	37.0	13 43 06 0	34.5	3.5
3	31	α Virginis	1	—10 19	32.0	56.8	13 17 21.8	46.8	11.8
4		ζ Virginis	4	— 0 25	19.5	43.8	13 27 08.2	32.5	57.0
5		m Virginis	5.6	— 7 53	59.5	24 0	13 33 48.6	13 0	38.0
6		O Virginis	6	—11 37	10.5	35.7	13 38 00.2	25.0	50.5
7		k Centauri	4.5	—32 11	14.8	43.8	13 43 12.5	41.0	10.0
8		η Bootis	3	+19 12	48.5	14.0	13 47 40.2	6.0	32.0
9		π Hydræ con.	4.5	—25 53	57.5	24.6	13 57 52.0	19.2	46.5
10		Moon II	(16.7)	—16 10	52.7	19.0	14 05 45.3	11.6	37.8
11		λ Virginis	4	—12 38	13.0	38.0	14 11 03.0	28.0	53.2
*12	April 4	η Ophiuchi	2.3	—15 31	56.5	22.0	17 05 47.5	12.5	37.5
13		A Ophiuchi	4.5	—26 22	9.5	36.5	17 10 04.0	31.0	58.5
14		ζ Ophiuchi	4.5	—20 56	5.8	31.5	17 15 57.5	23.5	49.8
15		λ Herculis	4.5	+26 14	56.5	23.5	17 28 51.0	17.8	45.5
16		Moon II	(20.8)	—28 34	28.5	57.5	17 39 26.0	54.5	23.5
17		μ Herculis	4	+27 49	51.5	19.0	17 44 46.5	14.0	41.5
18		ξ Herculis	4	+29 16	11.5	39.5	17 56 07.5	35.3	3.5
19		γ^2 Sagittarii	4	—30 25	8.3	36.5	18 00 05.0	33.0	1.5
20		o Herculis	4	+28 45	57.0	25.0	18 05 52.5	20.5	48.5
21		δ Sagittarii	3.4	—29 53	21.5	50.0	18 15 18.0	46.2	14.5
22	5	ξ Herculis	4	+29 16	17.8	45.8	17 56 14.0	41.5	9.5
23		γ^2 Sagittarii	4	—30 25	14.5	43.0	18 00 11.0	39.0	7.5
24		o Herculis	4	+28 45	3.2	31.0	18 05 58.8	25.7	54.5
25		μ^1 Sagittarii	3.4	—21 06	58.5	24.8	18 08 51.0	17.0	43.2
26		δ Sagittarii	3.4	—29 53	28.0	56.0	18 15 24.1	52.0	20.2
27		λ Sagittarii	4	—25 30	50.5	18.0	18 22 44.8	11.5	39.0
28		Moon II	(21.8)	—28 21	30.5	59.7	18 33 28.2	56.5	25.5
29		σ Sagittarii	3	—26 29	5.0	32.2	18 49 59.5	26.7	54.0
30	19	α Canis Maj.	1	—16 30	29.1	54.8	6 39 20.0	45.5	11.0
31		ε Canis Maj.	2.3	—28 46	39.0	7.2	6 53 34 8	2.5	30.5
32		Moon I	(5.9)	+26 35	55.8	23.8	7 29 51.8	19.8	47.8
33		β Geminorum	2	+28 25	49.7	18.3	7 36 45.5	12.8	40.8
34	20	α Canis Maj.	1	—16 30	29.0	54.5	6 39 20.0	45.3	11.0
35		Moon I	(7.0)	+23 16	48.3	15.3	8 27 42.5	9.5	36.6
36		δ Cancri	4.5	+18 45	57.9	23.5	8 36 49.5	15.0	40.8
37		ε Hydræ	4	+ 7 00	43.0	7.6	8 39 32.0	56.5	21.2
38		ζ Hydræ	4	+ 6 33	21.0	45.5	8 48 10.1	34.5	59.2
*39	21	δ Cancri	4.5	+18 45	56.5	21.5	8 36 48.5	15.0	40.0
40		ξ Cancri	5.6	+22 42	30.5	57.0	9 01 23.5	50.0	16.0
41		Moon I	(8.0)	+18 54	45.0	10.0	9 20 36.0	2.0	27.0
42		λ Leonis	4.5	+23 40	56.5	23.0	9 23 49.5	16.0	42.5
43	22	α Hydræ	2	— 7 58	9.3	34.0	9 20 58.2	23.0	47.2
44		λ Leonis	4.5	+23 40	56.8	23.5	9 23 50.3	16.8	43.5
45		ψ Leonis	6	+14 45	25.2	59.5	9 36 15.8	41.0	6.2
46		Moon I	(9.0)	+13 46	24.5	50.0	10 09 15.8	41.4	7.0

April 10.—Lengthened the pendulum six divisions.
19.—No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
13	37	54.02	— .451			+0	29.50	+5.30	13	37	24.07	1
13	43	06.10	— .632				.52		13	42	35.95	2
13	17	21.84	+ .872	+0	37.51	+0	37.17	+7.80	13	16	45.54	3
13	27	08.20	+ .727				.23		13	26	31.70	4
13	33	48.62	+ .834				.26		13	33	12.19	5
13	38	00.38	+ .891				.28		13	37	23.99	6
13	43	12.42	+1.266				.31		13	42	36.38	7
13	47	40.14	+ .404	+0	37.00		.33		13	47	03.21	8
13	57	51.96	+1.134				.39		13	57	15.70	9
14	05	45.28	+ .968				.43		14	05	08.82	10
14	11	03.04	+ .907			+0	37.46	+7.80	14	10	26.49	11
17	05	47.20	+ .928			+4	35.56	+6 90	17	01	12.57	*12
17	10	03.90	+1.114				.58		17	05	29.43	13
17	15	57.62	+1.020				.60		17	11	23.04	14
17	28	50.86	+ .268				.69		17	24	15.44	15
17	39	26.00	+1.155				.75		17	34	51.40	16
17	44	46.50	+ .239				.77		17	40	10.97	17
17	56	07.46	+ .211				.82		17	51	31.85	18
18	00	04.86	+1.194				.84		17	55	30.21	19
18	05	52.70	+ .220				.86		18	01	17.06	20
18	15	18.04	+1.183			+4	35.90	+6.90	18	10	43.32	21
17	56	13.72	+ .220			+4	42.28	+6.10	17	51	31.66	22
18	00	11 00	+1.140				.30		17	55	29.84	23
18	05	58 64	+ .211				.32		18	01	16.53	24
18	08	50.90	+ .973	+4	42.18		.33		18	04	09.54	25
18	15	24.06	+1.127				.36		18	10	42.83	26
18	22	44.76	+1.048				.38		18	18	03 43	27
18	38	28.04	+1.099				.45		18	33	46.69	28
18	49	59.48	+1.066			+4	42.50	+6.10	18	45	18.05	29
6	39	20.08	+ .359	+1	17.02	+1	17.02	—0.80	6	38	03.42	30
6	53	34.80	+ .438		17.00		.02		6	52	18.22	31
7	29	51 80	+ .140				.01		7	28	34.93	32
7	36	45.42	+ .085	+1	17.00	+1	17.01	—0.80	7	35	28.49	33
6	39	19.96	— .420	+1	16.12	+1	16.02	—0.90	6	38	03.52	34
8	27	42.44	— .143				15.96		8	26	26.34	35
8	36	49.34	— .175				.96		8	35	33.21	36
8	39	32.06	— .256	+1	15.66		.95		8	38	15 85	37
8	48	10.06	— .253			+1	15.95	—0.90	8	46	53.86	38
8	36	48.30				+1	16.37	+0.40	8	35	31.93	*39
9	01	23.40					.38		9	00	07.02	40
9	20	36.00					.39		9	19	19.61	41
9	23	49.50				+1	16.39	+0.40	9	22	33.11	42
9	20	58.34	+ .848	+1	17.33	+1	17.38	+1.00	9	19	41.81	43
9	23	50.18	+ .334				.38		9	22	33.13	44
9	36	15.74	+ .486				.40		9	34	58.83	45
10	09	15 74	+ .510			+1	17.42	+1.00	10	07	58.83	46

No. 12. There is evidently an error of 2*s*. in this observation. It is therefore rejected in the reduction to mean place.

39. Observation doubtful.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 22	γ Leonis	2	+20°39′	32.2	58.2	10 12 24.2	50.3	16.0
2	cont'd.	ζ Leonis	4	+10 08	49.0	13.8	10 25 38.5	3.2	28.0
3	23	γ Leonis	2	+20 39	33.8	0.3	10 12 26.0	52.0	18.0
4		ζ Leonis	4	+10 08	50.5	15.5	10 25 40.5	5.0	30.0
5		Moon I	(10.1)	+ 8 12	0.0	25.3	10 54 50.1	14.9	40.2
6		χ Leonis	4.5	+ 8 12	13.5	39.0	10 58 03.2	28.0	52.2
7		τ Leonis	4	+ 3 45	11.8	36.0	11 21 00.0	24.4	48.8
8	25	ο Virginis	4.5	+ 9 38	38.0	2.8	11 58 27.6	52.4	17.2
9		Moon I	(12.1)	— 3 26	39.5	4.4	12 21 29.2	54.0	18.8
10		β Corvi	2.3	—22 30	30.2	57.0	12 27 23.2	49.5	16.0
11		γ^1 Virginis	4	— 0 34	9.0	33.3	12 34 57.8	22.2	46.5
12	26	β Corvi	2.3	—22 30	31.2	57.5	12 27 23.6	50.0	16.5
13		γ^1 Virginis	4	— 0 34	9.0	33.5	12 34 57.8	22.0	46.5
*14		Jupiter 1st		— 2 56	42.5	6.5	12 44 31.0	55.5	20.0
15		ψ Virginis	5.6	— 8 40	37.2	1.8	12 47 26.5	51.0	15.7
16		36 Comæ Ber.	4.5	+18 16	34.3	59.8	12 52 25.5	51.2	17.0
17		ε Virginis	3	+10 16	47.8	12 5	12 55 37.5	2.5	27.5
18		41 Comæ Ber.	4.5	+28 29	59.3	27.5	13 00 55.0	22.5	51.0
19		Moon I	(13.1)	— 9 07	54.3	19.7	13 04 44.8	9.9	35.1
20		α Virginis	1	—10 19	21.0	45.6	13 18 10.5	35.0	0.0
21	27	γ^1 Virginis	4	— 0 34	9.2	33.7	12 34 58.0	22.5	47.0
*22		Jupiter 1st		— 2 53			12 44 07.5	32.0	56.7
23		36 Comæ Ber.	4.5	+18 16	34.0	0.0	12 52 25.6	51.5	17.0
24		ε Virginis	3	+10 16	47.7	13.0	12 55 37.7	2.5	27.5
25		42 Comæ Ber.	4.5	+18 23	45.8	11.6	13 03 37.5	3.3	28.8
26		α Virginis	1	—10 19	20.5	46.0	13 18 10.5	35.5	0.0
27		Moon I	(14.2)	—14 29	31.7	57.7	13 49 23.5	49 0	15.2
28		τ Virginis	4.5	+ 2 20	6.0	30.5	13 54 55.0	19.5	44.0
29	May 3	μ^1 Sagittarii	3.4	—21 06	46.5	11.5	18 05 38.5	5 0	31.5
30		δ Sagittarii	3.4	—29 53	15.9	44.0	18 12 12.1	40.3	8.5
31		λ Sagittarii	4	—25 30	38.5	6.2	18 19 33.0	59.8	27.5
32		φ Sagittarii	4.5	—27 09	11.8	39.0	18 37 06.5	34.0	1.5
33		σ Sagittarii	3	—26 29	52.6	20.0	18 46 47.5	15.0	42.0
34		τ Sagittarii	4	—27 54	28.5	56.2	18 58 23.8	51.0	19.0
*35		π Sagittarii	4.5	—21 16	49.6	16.0	19 01 41.5	7.5	33.8
36		Moon II	(20.4)	—27 09	43.0	11.6	19 14 39.5	7.8	36.5
37		6 Vulpeculæ	4	+24 21	35.9	3.0	19 23 29.5	56.1	23.0
38		h^2 Sagittarii	4.5	—25 14	30.0	57.5	19 28 24.8	52.0	19.5
*39		φ Cygni	4	+29 47	33.7	2.0	19 34 30.0	58.0	26.2
40	4	δ Aquilæ	3.4	+ 2 48	0.1	24.5	19 18 48.8	13.0	37.5
41		6 Vulpeculæ	4	+24 21	33.0	0.0	19 23 26.5	53.0	20.0
42		h^2 Sagittarii	4.5	—25 14	27.0	54.0	19 28 21.0	48.0	15.5
*43		φ Cygni	4	+29 47	31.5	59.6	19 34 27.3	55.5	23.5
44		γ Aquilæ	3	+10 13	12.6	37.5	19 40 02.0	26.8	52.0
45		59 Sagittarii	5	—27 35	36.3	3.6	19 48 30.5	57.5	24.5
46		θ Aquilæ	3 4	— 1 17	37.5	1.5	20 04 26.0	50.0	14.5
47		Moon II	(21.4)	—24 19	24.1	52.0	20 12 19.3	46.8	14.5

April 26.—Examined the instrumental adjustments.
27.—Weather hazy. No stars of second magnitude visible to the eye.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
10	12	24.18	+ .386			+1	17.42	+1.00	10	11	07.15	1
10	25	38.50	+ .550				.43		10	24	21.62	2
10	12	26.02	+ .386			+1	19.38	+1.90	10	11	07.08	3
10	25	40.30	+ .550				.35		10	24	21.50	4
10	54	50.10	+ .577				.38		10	53	31.30	5
10	58	03.18	+ .577				.38		10	56	44.38	6
11	21	00.20	+ .665			+1	19.42	+1.90	11	19	41.44	7
11	58	27.60				+1	24.61	+2.00	11	57	02.99	8
12	21	29.18					.64		12	20	04.54	9
12	27	23.18		+1	24.64		.64		12	25	58.54	10
12	34	57.76				+1	24.66	+2.00	12	33	33.10	11
12	27	23.76	+ .190	+1	25.03	+1	25.01	+0.30	12	25	58.94	12
12	34	57.76	+ .127				.01		12	33	32.88	13
12	44	31.10	+ .134				.01		12	43	07.69	*14
12	47	26 44	+ .149				.01		12	46	01.58	15
12	52	25.56	+ .074				.01		12	51	00.62	16
12	55	37.56	+ .097				.01		12	54	12.65	17
13	00	55.06	+ .041				.01		12	59	30.09	18
13	04	44.76	+ .150				.01		13	03	19.90	19
13	18	10.42	+ .154	+1	24.88	+1	25.02	+0.30	13	16	45.55	20
12	34	58.08	+ .127			+1	25 31	+0.30	12	33	32.90	21
12	44	07.50	+ .134				.31		12	42	43.79	*22
12	52	25.62	+ .074				.31		12	51	00.38	23
12	55	37.68	+ .097				.31		12	54	12.47	24
13	03	37.40	+ .073				.32		13	02	12.15	25
13	18	10.50	+ .154	+1	24.96		.32		13	16	45.33	26
13	49	23.42	+ .166				.33		13	47	58.26	27
13	54	55.00	+ .119			+1	25.33	+0.30	13	53	29.79	28
18	05	38.60	— .557	+1	27.47	+1	27.83	—3.10	18	04	10.21	29
18	12	12.16	— .644				.82		18	10	43.70	30
18	19	33.00	— .600				.80		18	18	04.60	31
18	37	06.56	— .615				.76		18	35	38.19	32
18	46	47.42	— .608				.74		18	45	19.07	33
18	58	23.70	— .623				.71		18	56	54.37	34
19	01	41.68	— .558				.71		19	00	13.41	*35
19	14	39.68	— .615				.68		19	13	11.39	36
19	23	29 50	— .164				.66		19	22	01.68	37
19	28	24.76	— .596				.65		19	26	56.51	38
19	34	29.98	— .109			+1	27.64	—3.10	19	33	02.23	*39
19	18	48.78	— .354	+1	24.08	+1	24.15	—3.67	19	17	24.28	40
19	23	26.50	— .164				.14		19	22	02.20	41
19	28	21.10	— .596				.13		19	26	56.37	42
19	34	27.48	— .109				.11		19	33	03.26	*43
19	40	02.18	— .292	+1	24.07		.10		19	38	37.79	44
19	48	30 46	— .619				.07		19	47	05.77	45
20	04	25.90	— .388				.04		20	03	01.47	46
20	12	19.34	— .588			+1	24.01	—3.67	20	10	44.74	47

Nos. 14 and 22. Sidereal time semidiameter passing meridian 1*s*.47.
35. Observation doubtful.
39 and 43. Transit over middle wire recorded 19*h*. 35*m*.

TRANSITS OBSERVED AT WASHINGTON IN 1838.

No. for ref.	Month and day.	Name of object.	Mag.	Declina-tion.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	May 5	54 Leonis	4.5	+25°36′	53.1	20.5	10 46 47.2	14.3	41.5
2		α Hyd. & Crat.	4	−17 27	58.5	24.0	10 51 49.6	15.5	41.0
3		χ Leonis	4.5	+ 8 12	47.5	12.0	10 56 36.5	1.0	25.6
4		δ Leonis	3	+21 24	34.2	0.5	11 05 26.7	53.0	19.0
5		γ Hyd. & Crat.	4	−16 48	54.1	19.7	11 16 45.0	10.5	36.0
6	6	β Orionis	1	− 8 24	31.0	56.0	5 06 20.5	45.0	10.0
7		β Tauri	2	+28 28	44.5	12.5	5 15 40.0	7.5	35.5
8		42 Leonis min.	4.5	+31 31	30.5	59.6	10 36 28.0	56.5	25.5
9		ν Hyd. & Crat.	4	−15 21	24.0	49.1	10 41 14.4	39.9	5.2
10		54 Leonis	4.5	+25 36	33.0	0.0	10 46 26.6	53.8	20.8
11		α Hyd. & Crat	4	−17 27	38.5	4.0	10 51 29.5	55.0	20.5
12		χ Leonis	4.5	+ 8 12	26.8	51.5	10 56 16.0	40.5	5.2
13		δ Leonis	3	+21 24	13.5	40.0	11 05 06.0	32.2	58.5
14	8	χ Leonis	4.5	+ 8 12	28.5	53.0	10 56 17.5	42.0	7.0
15		δ Leonis	3	+21 24	15.5	41.6	11 05 07.7	34.0	0.2
16		δ Hyd. & Crat.	3.4	−13 55	2.6	28.0	11 10 53.2	18.2	43.2
17	10	ν Hyd & Crat.	4	−15 21	35.6	1.5	10 41 26.3	51.8	17.0
18		54 Leonis	4.5	+25 36	45.0	12.3	10 46 39.0	5.8	33.0
19		α Hyd. & Crat.	4	−17 27	50.2	15.8	10 51 41.3	6.8	32.5
20		χ Leonis	4.5	+ 8 12	38.5	3.5	10 56 28.0	52.5	17.0
21		δ Leonis	3	+21 24	25.5	52.0	11 05 18.0	44.2	10.5
22		δ Hyd. & Crat.	3.4	−13 55	12.9	38.1	11 11 03.0	28.2	53.4
23	11	ζ Leonis	4.5	+24 13	39.0	5.7	10 07 32.3	59.0	25.7
24		γ Leonis	2	+20 39	1.8	28.0	10 10 54.0	20.0	46.0
25		μ Hydræ	4	−16 01	16.0	41.5	10 18 06.5	31.7	57.5
26		ξ Leonis	4	+10 08	18.8	43.5	10 24 08.0	32.6	57.0
27		ν Hyd & Crat.	4	−15 21	39.0	4.5	10 41 29.5	54.5	20.0
28		54 Leonis	4.5	+25 36	48.0	15.7	10 46 42.0	9.0	36.5
29		α Hyd. & Crat.	4	−17 27	45.2	10.5	10 51 36.0	1.5	27.5
30		χ Leonis	4.5	+ 8 12	33.2	58.0	10 56 22.5	47.0	11.5
31	14	μ Leonis	3	+26 46	28.2	55.6	9 43 22.7	50.0	17.2
32		α Leonis	1	+12 45	44.3	9.5	9 59 34.2	59.3	24.2
33		ζ Leonis	4.5	+24 13	37.2	4.0	10 07 30.5	57.2	24.0
34		γ Leonis	2	+20 39	59.4	26.0	10 10 52.0	18.2	44.5
35		μ Hydræ	4	−16 01			10 18 05.0	30.1	55.5
36		ξ Leonis	4	+10 08	17.4	42.0	10 24 06.5	31.4	56.2
37		ν Hyd. & Crat.	4	−15 21	37.4	2.7	10 41 27.7	53.0	18.5
38		β Corvi	2.3	−22 31			12 25 44.5	11.0	37.5
39		γ^1 Virginis	4	− 0 34	29.5	54.0	12 33 18.0	42.0	6.5
40		Jupiter 1st		− 2 22	13.7	38.1	12 37 02.4	26.8	52.0
*41		δ Virginis	3.4	+ 4 16	28.5	53.0	12 47 17.5	42.0	6.5
42	15	ε Corvi	4	−21 44			12 01 41.0	7.2	33.5
43		γ Corvi	3	−16 39	31.0	56.5	12 07 21.8	47.3	12.5
44		η Virginis	3.4	+ 0 14	41.0	5.5	12 11 30.0	54.5	19.0
45		α Comæ Ber.	4.5	+27 48		18.0	12 18 45.0	13.5	41.5
46		β Corvi	2.3	−22 31	53.8	20.2	12 25 46.3	12.5	39.2
47		γ^1 Virginis	4	− 0 34	31.0	55.5	12 33 20.0	44.0	58.8

May 5.—At 4*h*. 26*m*, altered the pendulum.
6.—Mr. Montandon examined the clock.
11.—At 10*h* 48*m*., stopped the clock, and lengthened pendulum 3 divisions.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
10	46	47.32	— .154			—0	07.73	+1.50	10	46	54.90	1
10	51	49.72	— .523				.73		10	51	56.93	2
10	56	36.52	— .258				.72		10	56	43.98	3
11	05	26.68	— .193	—0	07.71		.71		11	05	34.20	4
11	16	45.06	— .517			—0	07.70	+1.50	11	16	52.24	5
5	06	20.50	+ .445	—0	27.19	—0	27.06	—3.20	5	06	48.01	6
5	15	40.00	+ .122		27.10		.09		5	16	07.21	7
10	36	28.02	+ .090				28.02		10	36	56.13	8
10	41	14.52	+ .504				.03		10	41	43.05	9
10	46	26.84	+ .154				.04		10	46	55.03	10
10	51	29.50	+ .523				.05		10	51	58.07	11
10	56	16.00	+ .258				.06		10	56	44.32	12
11	05	06.04	+ .193	—0	27.97	—0	28.07	—3.20	11	05	34.30	13
10	56	17.60				—0	26.38	+1.50	10	56	43.98	14
11	05	07.80		—0	26.37		.37		11	05	34.17	15
11	10	53.04		—0	26.38	—0	26.37	+1.50	11	11	19.42	16
10	41	26.44	+ .280			—0	16.08	+4.18	10	41	42.80	17
10	46	39.02	+ .085				.06		10	46	55.17	18
10	51	41.32	+ .291				.05		10	51	57.66	19
10	56	27.90	+ .172				.03		10	56	44.10	20
11	05	18.04	+ .108	—0	16.00		.01		11	05	34.16	21
11	11	03.12	+ .273	—0	16.01	—0	16.00	+4.18	11	11	19.39	22
10	07	32.34	+ .111			—0	12.97	+3.18	10	07	45.42	23
10	10	53.96	+ .136				.96		10	11	07.06	24
10	18	06.64	+ .340				.94		10	18	19.92	*25
10	24	07.98	+ .195				.92		10	24	21.09	26
10	41	29.50	+ .336				.90		10	41	42.74	27
10	46	42.24	+ .103				12.88	+3.18	10	46	55.22	28
10	51	36.14	+ .349				20.75	+1.00	10	51	57.24	29
10	56	22.44	+ .156			—0	20.75	+1.00	10	56	43.35	30
9	43	22.74	— .522			—0	15.79	+1.80	9	43	38.01	31
9	59	34.30	— .811	—0	15.68		.77		9	59	49.26	32
10	07	30.58	— .498				.76		10	07	45.84	33
10	10	52.02	— .612				.76		10	11	07.17	34
10	18	05.00	—1.533				.75		10	18	19.22	35
10	24	06.70	— .876				.74		10	24	21.56	36
10	41	27.86	—1.513				.72		10	41	42.07	37
12	25	44.50	—1.710	—0	15.68		.59		12	25	58.38	38
12	33	18.00	—1.142				.58		12	33	32.44	39
12	37	02.60	—1.188				.58		12	37	18.41	*40
12	47	17.50	—1.026			—0	15.57	+1.80	12	47	32.04	41
12	01	41.00	— .858			—0	12.96	+2.70	12	01	53.10	42
12	07	21.82	— .789				.95		12	07	33.98	43
12	11	30.00	— .572				.94		12	11	42.37	44
12	18	45.50	— .201				.93		12	18	58.23	45
12	25	46.40	— .871	—0	12.92		.92		12	25	58.45	46
12	33	19.86	— .582			—0	12.91	+2.70	12	33	32.19	47

No. 25. Recorded 10*h.* 19*m.* at transit over middle wire.
40. Recorded at transit over middle wire 39*m.* Sidereal time of semidiameter passing meridian allowed = 1*s.*42.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 16	γ^{1} Virginis	4	− 0°34′	31.5	56.0	12 33 20.5	44.5	9.2
2		δ Virginis	3.4	+ 4 16	31.0	55.5	12 47 19.9	44.3	8.6
3		36 Comæ Ber.	4.5	+18 16	56.5	22.5	12 50 48.0	13.5	39.3
4		ε Virginis	3.4	+11 48	10.2	35.5	12 54 00.2	25.0	49.8
5		ψ Hydræ con.	4.5	+22 15	21.5	46.2	13 00 14.3	40.5	7.0
6		γ Hydræ con.	4.5	−22 19	9.0	35.0	13 10 01.6	27.8	54.0
7	18	δ Hyd.& Crat.	3.4	−13 54	23 0	48.0	11 11 13.0	38.0	3.2
8		τ Leonis	4	+ 3 43	46.1	10.5	11 19 34.7	59.0	23.5
9		ξ Hyd.& Crat	4	−30 55			11 25 01.8	30.3	59.0
10		υ Leonis	4.5	+ 0 03	49.3	13.7	11 28 38.0	2.2	27.0
11		ζ Hyd & Crat.	4.	−17 27	41.3	7.0	11 36 32.2	57.5	23.4
12		β Leonis	2.3	+15 28	55.9	21.3	11 40 46.5	11.8	37.4
13	19	α Hydræ	2	− 7 58	49.0	13.7	9 19 38.3		
14		ε Leonis	3	+24 31	47.0	13.6	9 36 40.4	7.2	34.0
15		Moon I	(6.6)	+15 31	30.1	56.2	9 50 21.7	47.5	13.5
16		γ Leonis	2	+20 39	11.5	37.7	10 11 03.5	29.6	55.7
*17		β Hyd.& Crat.	4	−33 00	48.5	17 8	11 44 46.5	15.5	44.8
18		b Virginis	5.6	+ 4 33	51.5	16.0	11 51 40.5	5.0	29.5
19		ε Corvi	4	−21 43	57.6	24.0	12 01 50.0	16.0	42.5
20	20	Moon I	(7.7)	+ 9 58	44.2	9.6	10 37 34.3	59.7	25.1
*21		54 Leonis	6	+26 21	59.0	26.0	10 46 52.8	20.0	46.8
22		χ Leonis	4.5	+ 8 12		17.0	10 56 41.8	6.5	31.0
23		δ Leonis	3	+21 24	39.5	6.0	11 05 32.0	58.0	24.5
24		δ Hyd & Crat.	3.4	−13 54	26.9	52.2	11 11 17.0	42.0	7.3
25		τ Leonis	4	+ 3 43	49.9	14.5	11 19 38.8	3.0	27.5
26		ξ Hyd.& Crat.	4	−30 55	8.8	37.3	11 25 05.5	34.0	2.5
27		υ Leonis	4.5	+ 0 03	53.2	17.6	11 28 41.8	6.3	30.8
28	22	τ Leonis	4	+ 3 43	54.0	18.5	11 19 42.9	7.4	32.0
29		ξ Hyd.& Crat.	4	+30 55	13.0	41.5	11 25 09.8	38.2	6.8
30		υ Leonis	4.5	+ 0 03	57.2	21.6	11 28 46.0	10.5	35.0
31		ζ Hyd.& Crat.	4	−17 27	49.1	15.0	11 36 40.3	5.5	31.5
32		β Virginis	3.4	+ 2 40	33.5	58.0	11 42 22.4	46.5	11.3
33		b Virginis	5.6	+ 4 33	57.0	21.5	11 51 46.0	10.5	35.0
34		ο Virginis	4.5	+ 9 37	14.5	39.5	11 57 04.0	28.5	53.5
35		α Corvi	4.5	−23 44	18.1	44.6	12 00 11.3	38.0	4.5
36		Moon I	(9.7)	− 1 38	31.8	57.0	12 05 22.3	47.5	12.7
37		γ Corvi	3	−16 33	45.0	10 5	12 07 35.8	1.3	26.8
38		η Virginis	3.4	+ 0 14	55.3	19.8	12 11 44.1	8.5	32.9
39		α Comæ Ber.	4.5	+27 43	5.3	32.7	12 19 00.0	27.4	54.6
40		q Virginis	5.6	− 8 34	43.0	7.6	12 25 32.2	56.8	21.3
41	24	δ Virginis	3.4	+ 4 16	53.1	17.5	12 47 42.0	6.5	31.0
42		36 Comæ Ber.	4.5	+18 16		44.3	12 51 09.8	35.3	1.5
43		ε Virginis	3.4	+11 48	32.2	57.2	12 54 22.0		
44		α Virginis	1	−10 19	6.0	30.6	13 16 55.3	20.1	45.0
45		Moon I	(11.8)	−12 50	51.1	16.5	13 32 42.0	7.5	33.0
46	June 6	ζ Virginis	4	+ 0 19			13 26 27.0	51.5	16.5
47		k Centauri	4.5	−32 11	33.7	2.6	13 42 31.4	0.5	29.4

May 27.—Took one tenth of an inch of mercury out of the pendulum cistern, at the request of Mr. Montandon.
June 3.—Shortened the pendulum 27 divisions.
5.—Examined instrumental adjustments.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
12 33 20.34	— .682		—0 12.55	+1.04	12 33 32.21	1
12 47 19.86	— .522		.54		12 47 31.88	2
12 50 47.96	— .341		.54		12 51 00.16	3
12 54 00.14	— .426		.53		12 54 12.24	4
13 00 14.30	— .867		.53		13 00 25.96	5
13 10 01.44	— .869		—0 12.52	+1.04	13 10 13.09	6
11 11 13.04	+ .205	—0 06.07	—0 06.03	+2.50	11 11 19.28	7
11 19 34.76	+ .144		.02		11 19 40.92	8
11 25 01.80	+ .274		.01		11 25 08.08	9
11 28 38.04	+ .156		.01		11 28 44.21	10
11 36 32.28	+ .218		05.99		11 36 38.49	*11
11 40 46.58	+ .103	—0 05.95	+0 05.98	+2.50	11 40 52.66	12
9 19 38.30	+ .184	—0 03.03	—0 03.08	+2.12	9 19 41.56	13
9 36 40.44	+ .068	—0 03.11	.06		9 36 43.57	14
9 50 21.80	+ .103		.04		9 50 24.94	15
10 11 03.60	+ .084		.01		10 11 06.69	16
11 44 46.62	+ .283		02.86		11 44 49.76	*17
11 51 40.50	+ .142		.85		11 51 43.49	18
12 01 50.02	+ .234		—0 02.84	+2.12	12 01 53.09	19
10 37 34.58	+ .176		—0 01.95	+1.40	10 37 36.71	20
10 46 52.92	+ .088		.94		10 46 54.95	*21
10 56 41.78	+ .186		.93		10 56 43.90	22
11 05 32.00	+ .115	—0 01.92	.92		11 05 34.03	23
11 11 17.08	+ .296	—0 01.92	.92		11 11 19.30	24
11 19 38.74	+ .208		.91		11 19 40.86	25
11 25 05.62	+ .395		.90		11 25 07.91	26
11 28 41.94	+ .227		—0 01.90	+1.40	11 28 44.12	27
11 19 42.96	+ .208		+0 02.29	+2.84	11 19 40.88	28
11 25 09.86	+ .395		.30		11 25 07.95	29
11 28 46.06	+ .227		.30		11 28 43.99	30
11 36 40.28	+ .315		.32		11 36 38.00	31
11 42 22.34	+ .263		.33		11 42 20.27	32
11 51 46.00	+ .204		.35		11 51 43 85	33
11 57 04.00	+ .179		.36		11 57 01.82	34
12 00 11.30	+ .350		.37		12 00 09.28	35
12 05 22.26	+ .234		.38		12 05 20.11	36
12 07 35.88	+ .310		.38		12 07 33.81	37
12 11 44.12	+ .225		.39		12 11 41.96	38
12 19 00.00	+ .078		.41		12 18 57.67	39
12 25 32.18	+ .269		+0 02.42	+2.84	12 25 30 03	40
12 47 42.02	— .227		+0 09.58	+3.56	12 47 32.21	41
12 51 09.80	— .148		.59		12 51 00.06	42
12 54 22.00	— .186		.59		12 54 12.22	43
13 16 55.40	— .308	+0 09.71	.65		13 16 45.44	44
13 32 42.02	— .322		+0 09.69	+3.56	13 32 32.01	45
13 26 27.00	— .211		—0 04.83	—0.84	13 26 31.62	46
13 42 31 52	— .373		.84		13 42 36.73	47

No. 17. This is 28 Hyd. & Crat. of Flamstead ; 11 Hyd & Crat. is also printed β in the catalogue of the Astronomical Society

21. Recorded as 30 Leonis Min.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	June 6	η Bootis	3	+19°12′	7.0	33.0	13 46 59.0	25.0	51.0
2	cont'd.	τ Virginis	4.5	+ 2 18	36.5	1.1	13 53 25.5	50.0	14.3
3		π Hydræ con.	4.5	—25 54	17.2	44.5	13 57 11.0	38.3	3.5
4		κ Virginis	4	— 9 31	27.5	52.5	14 04 17.0	41.5	6.5
5	7	γ^1 Virginis	4	— 0 33	38.5	3.0	12 33 27.5	51.5	16.1
6		δ Virginis	3.4	+ 4 16			12 47 26.4	51.0	15.5
7		36 Comæ Ber.	4.5	+18 16	3.5	29.2	12 50 54.6	20.3	46.0
8		ε Virginis	3.4	+11 48	17.0	41.8	12 54 06.5	31.5	56.5
9		θ Virginis	4.5	— 4 41	45.2	9.5	13 01 34.0	58.5	23.2
10		γ Hydræ con.	4.5	—22 18	15.3	41.8	13 10 08.0	34.2	0.8
11		ζ Virginis	4	+ 0 19	38.2	2.5	13 26 26.7	51.2	15.5
12		*k* Centauri	4.5	—32 11	33.0	2.2	13 42 30.5	59.0	28.3
13		η Bootis	4	+19 12		32.7	13 46 58.5	24.2	50.5
14		τ Virginis	4.5	+ 2 20	36.0	0.3	13 53 24.5	49.0	13.5
15		π Hydræ con.	4.5	—25 54	16.4	43.5	13 57 10.5	37.5	4.5
16		κ Virginis	4	— 9 31	26.8	51.5	14 04 16.2	41.0	5.6
17	8	β Corvi	2.3	—22 30	59.5	25.5	12 25 52.0	18.2	45.0
18		γ^1 Virginis	4	— 0 33	37.2	1.6	12 33 26.0	50.5	15.0
19		*p* Centauri	6	—33 08			12 41 54.0	22.8	51.5
20		δ Virginis	3.4	+ 4 16	36.6	1.5	12 47 25.5	50.0	14.5
21		36 Comæ Ber.	4.5	+18 16	2.3	28.0	12 50 53.5	19.2	45.0
22		ε Virginis	3.4	+11 18	15.7	40.7	12 54 05.5	30.5	55.5
23		θ Virginis	4.5	— 4 41	44.1	8.5	13 01 33.0	57.5	22.0
24		γ Hydræ con.	4.5	—22 18	14.1	40.5	13 10 06.5	33.0	59.5
25		*d* Centauri	5	—38 34		9.0	13 21 39.5		
26		ζ Virginis	4	+ 0 19	37.0	1.5	13 26 26.0	50.0	14.5
27		*k* Centauri	4.5	—32 11	31.8	0.8	13 42 29.5	58.3	27.0
28		η Bootis	8	+19 12	5.3	31.5	13 46 57.0	22.5	48.8
29		κ Virginis	4	— 9 31			14 04 14 8	39.5	4.5
30	9	θ Virginis	4.5	— 4 41	43.3	7.6	13 01 32.0	56.5	21.0
31		γ Hydræ con.	4.5	—22 18	13.5	40.0	13 10 06.0	32.5	59.0
32		*d* Centauri	4	—38 34	37.1	8.5	13 21 39.5	10.5	41.8
33		ζ Virginis	4	+ 0 19	36.3	0.5	13 26 25.0	49.5	14.0
34		*k* Centauri	4.5	—32 11	31.3	0.5	13 42 29.2	58.0	26.5
35		η Bootis	3	+19 12	5.0	30.7	13 46 56.5	22.3	48.0
36		τ Virginis	4.5	+ 2 20	34.3	58.8	13 53 23.0	47.5	12.0
37		π Hydræ con.	4.5	—25 54	14.2	41.8	13 57 08.5	35.5	3.0
38		κ Virginis	4	— 9 31	25.0	50.0	14 04 14.5	39.2	4.2
39	10	*k* Centauri	4.5	—32 11	30.2	59.5	13 42 28.0	56.6	26.0
40		η Bootis	3	+19 12	4.5	30.3	13 46 56.0	21.6	47.3
41		τ Virginis	4.5	— 2 20	33.5	58.0	13 53 22.5	47.0	11.3
42		θ Centauri	2	—35 34	9.2	39.2	13 57 08.8	39.0	8.6
43		κ Virginis	4	— 9 31	24.5	49.5	14 04 13.8	38.5	3.5
44	15	*d* Centauri	4	—38 34	36.2	7.5	13 21 38.2	9.5	40.0
45		ζ Virginis	4	+ 0 19	35.3	0.0	13 26 24.0	48.5	13.0
46		Centauri	5	—32 14	30.0	59.5	13 36 28.0	57.2	26.0
47		*k* Centauri	4.5	—82 11	30.5	59.3	13 42 28.0	56.8	26.2
48		η Bootis	3	+19 12	4.3	30.2	13 46 55.8	21.5	47.5

June 10.—Adjusted the transit.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
13	46	59.00	— .109	—0	04.84	—0	04.84	—0.84	13	47	03.73	1
13	53	25.48	— .198				.84		13	53	30.12	2
13	57	10.90	— .335				.85		13	57	15.41	3
14	04	17.00	— .253			—0	04.85	—0.84	14	04	21.60	4
12	33	27.32	— .212			—0	05.33	—0.54	12	33	32.44	5
12	47	26.40	— .190				.34		12	47	31.55	6
12	50	54.72	— .124				.34		12	50	59.94	7
12	54	06.66	— .155				.34		12	54	11.84	8
13	01	34.08	— .227				.34		13	01	39.19	9
13	10	08.02	— .316				.35		13	10	13.05	10
13	26	26.82	— .209				.35		13	26	31.96	11
13	42	30.60	— .373				.35		13	42	35.58	12
13	46	58.48	— .109	—0	05.36		.36		13	47	03.73	13
13	53	24.66	— .198				.36		13	53	29.82	14
13	57	10.48	— .335				.36		13	57	15.50	15
14	04	16.22	— .253			—0	05.37	—0.54	14	04	21.34	16
12	25	52.04	— .570	—0	06.82	—0	06.83	—1.15	12	25	58.30	17
12	33	26.06	— .370				.84		12	33	32.53	18
12	41	54.00	— .682				.85		12	42	00.17	19
12	47	25.62	— .342				.85		12	47	32.13	20
12	50	53.60	— .223				.85		12	51	00.23	21
12	54	05.58	— .284				.86		12	54	12.16	22
13	01	33.02	— .415				.86		13	01	39.47	23
13	10	06 72	— .574				.87		13	10	13.02	24
13	21	39.50	— .749				.87		13	21	45.62	25
13	26	25 80	— .374				.88		13	26	32.31	26
13	42	29.48	— .670				.89		13	42	35.70	27
13	46	57.02	— .214	—0	06.91		.89		13	47	03.70	28
14	04	14 80	— .455			—0	06.90	—1.15	14	04	21.24	29
13	01	32.08	— .415			—0	07.34	—0.48	13	01	39.00	30
13	10	06.20	— .574				.34		13	10	12.97	31
13	21	39.48	— .749				.34		13	21	46.07	32
13	26	25.06	— .374				.34		13	26	32.03	33
13	42	29.10	— .670				.35		13	42	35.78	34
13	46	56.50	— .214	—0	07.42		.35		13	47	03.64	35
13	53	23.12	— .357				.35		13	53	30.11	36
13	57	08.60	— .602				.36		13	57	15.36	37
14	04	14.58	— .455			—0	07.36	—0.48	14	04	21.48	38
13	42	28.06	— .670			—0	08.01	—0.66	13	42	35.40	39
13	46	55.95	— .214	—0	07.97		.01		13	47	03.75	40
13	53	22.56	— .357				.01		13	53	30.21	41
13	57	08.96	— .704				.01		13	57	16.27	42
14	04	13.96	— .455			—0	08.02	—0.66	14	04	21.52	43
13	21	38.28	— .312			—0	07.91	+0.72	13	21	45.89	44
13	26	24.16	— .158				.91		13	26	31.91	45
13	36	28.14	— .279				.91		13	36	35.77	46
13	42	28.16	— .279				.90		13	42	35.78	47
13	46	55.86	— .089	—0	07.90	—0	07.90	+0.72	13	46	03.67	48

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 15 cont'd.	τ Virginis	4.5	— 2°20′	33.2	57.5	13 53 22.0	46.5	11.0
2		π Hydræ con.	4.5	—25 54	14.0	41.0	13 57 08.0	35.0	2.0
3		κ Virginis	4	— 9 31			14 04 13.3	38.0	3.0
4	16	d Centauri	4	—38 34	36.5	8.0	13 21 39.0	10.0	41.5
5		ζ Virginis	4	+ 0 19	35.5	0.0	13 26 24.5	49.0	13.5
6		k Centauri	4.5	—32 11	31.0	0.0	13 42 28.5	57.0	26.0
7		η Bootis	3	+19 12	5.0	30.7	13 46 56.3	22.0	47.8
8		τ Virginis	4.5	— 2 20			13 53 22.5	47.0	11.5
9		θ Centauri	2	—35 34	9.3	39.5	13 57 09.2	39.3	9.5
10		κ Virginis	4	— 9 31	24.8	49.5	14 04 14.0	38.7	3.5
11	17	θ Virginis	4.5	— 4 41	43.2	7.6	13 01 32.0	56.5	21.0
12		γ Hydræ con.	4.5	—22 18	13.5	39.8	13 10 06.0	32.5	59.0
13		d Centauri	4	—38 34	37.2	8.5	13 21 39.6	10.5	41.6
14		ζ Virginis	4	+ 0 19	36.4	1.0	13 26 25.3	49.7	14.0
15		k Centauri	4.5	—32 11	31.2	0.5	13 42 29.0	57.5	26.5
16		η Bootis	3	+19 12	5.5	31.2	13 46 56.8	22.5	48.3
17		τ Virginis	4.5	+ 2 20	34.1	58.5	13 53 23.0	47.5	11.6
18		θ Centauri	2	—35 34	10.2	40.3	13 57 10.1	40.0	10.3
19		κ Virginis	4	— 9 31	25.2	50.0	14 04 14.5	39.6	4.0
20	19	ρ Bootis	4	+31 05	52.5	21.0	14 24 49.5	18.0	46.5
21		π Bootis	3.4	+17 06	14.5	40.0	14 33 05.5	31.0	56.5
22		ε Bootis	3	+27 45	58.2	26.0	14 37 53.5	21.2	48.8
23		α^2 Libræ	3	—15 22	4.5	29.8	14 41 55.0	20.2	45.5
24		20 Libræ	3.4	—24 39	42.6	9.5	14 54 36.0	2.5	30.0
25	20	Moon I	(9.4)	—11 03	52.5	18.0	13 15 43.2	8.5	34.0
26		α Virginis	1	—10 19	50.3	15.0	13 16 39.7	4.5	29.3
27		ζ Virginis	4	+ 0 19	37.0	1.5	13 26 26.0	50.5	15.0
28		m Virginis	5.6	— 7 53	17.5	42.0	13 33 06.5	31.0	55.0
29		O Virginis	6	—11 37	29.0	54.0	13 37 18.8	43.5	8.5
30		η Bootis	3	+19 13	6.3	32.2	13 46 58.0	23.8	49.7
31		τ Virginis	4.5	+ 2 20	35.3	59.8	13 53 24.2	48.6	13.0
32		θ Centauri	2	—35 34	11.2	41.5	13 57 11.3	41.3	11.5
33		κ Virginis	4	— 9 31	26.1	51.0	14 04 15.6	40.3	5.3
34		8 Hydræ con.	5.6	—28 46	47.8	15.5	14 18 43.0	10.6	39.0
35		ρ Bootis	4	+31 05	54.2	22.5	14 24 51.0	19.3	48.0
*36		π Bootis	3.4	+17 06	16.2	42.0	14 33 07.3	32.5	58.3
37		α^2 Libræ	3	—15 22	5.7	31.0	14 41 56.2	21.5	47.0
38	22	m Virginis	5.6	— 7 53	17.0	41.5	13 33 06.0	30.5	55.0
*39		k Centauri	4.5	—32 11	32.3	1.5	13 42 29.8	58.5	27.4
40		η Bootis	3	+19 13	6.2	32.0	13 46 57.7	23.5	49.2
41		τ Virginis	4.5	+ 2 20	35.0	59.4	13 53 23.8	48.2	12.6
42		θ Centauri	2	—35 34	10.5	40.8	13 57 10.5	40.8	10.5
43		κ Virginis	4	— 9 31	25.5	50.8	14 04 15.3	39.7	5.0
44		λ Virginis	4	—12 36	31.0	56.0	14 10 21.0	46.0	11.0
45		8 Hydræ con.	5.6	—28 46	47.0	14.5	14 18 42.2	9.7	38.0
46		ρ Bootis	4	+31 05	53.6	22.0	14 24 50.0	18.0	46.5
47		α Lupi	3	—46 41	2.0	37.5	14 31 13.0	48.5	24.0
48		ε Bootis	3	+27 45	59.0	26.5	14 37 54.0	21.5	49.0

June 16.—Corrected all errors of the instrument.

20.—☽ ☌ 68 Virginis.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
13 53 22.04	— .165		—0 07.90	+0.72	13 53 29.77	1
13 57 08.00	— .251		.89		13 57 15.64	2
14 04 13.30	— .189		—0 07.89	+0.72	14 04 21.00	3
13 21 39.00			—0 07.31	+0.58	13 21 46.31	4
13 26 24.50			.31		13 26 31.81	5
13 42 28.50			.30		13 42 35.80	6
13 46 56.36		—0 07.30	.30		13 47 03.66	7
13 53 22.50			.30		13 53 29.80	8
13 57 09.36			.29		13 57 16.65	9
14 04 14.10			—0 07.29	+0.58	14 04 21.39	10
13 01 32.06			—0 06.81	+0.51	13 01 38.87	11
13 10 06.16			.80		13 10 12.96	12
13 21 39.48			.80		13 21 46.28	13
13 26 25.28			.80		13 26 32.08	14
13 42 28.94			.79		13 42 35.83	15
13 46 56.86		—0 06.79	.79		13 47 03.65	16
13 53 22.94			.79		13 53 29.73	17
13 57 10.18			.79		13 57 16.97	18
14 04 14.66			—0 06.78	+0.51	14 04 21.44	19
14 24 49.50	+ .040		—0 06.44	+0.58	14 24 55.98	20
14 33 05.50	+ .097		.43		14 33 12.03	21
14 37 53.54	+ .054	—0 06.39	.43		14 38 00 02	22
14 41 55.00	+ .210	—0 06.48	.43		14 42 01.64	23
14 54 36.12	+ .246		—0 06.42	+0.58	14 54 42.79	24
13 15 43.24	— .263		—0 05.76	+1.24	13 15 48.74	25
13 16 39.76	— .257	—0 05.74	.76		13 16 45.26	26
13 26 26.00	— .208		.75		13 26 31.54	27
13 33 06.50	— .245		.75		13 33 12.01	28
13 37 18.76	— .264		.74		13 37 24.24	29
13 46 58.00	— .119	05.75	.74		13 47 03.62	30
13 53 24.18	— .198		.73		13 53 29.71	31
13 57 11.36	— .395		.73		13 57 16.70	32
14 04 15.66	— .253		.72		14 04 21.13	33
14 18 43.18	— .351		.71		14 18 48.54	34
14 24 51.00	— .053		.71		14 24 55.66	35
14 33 07.26	— .129		.70		14 33 12.83	*36
14 41 [illegible]	[illegible] .280	—0 05.69	—0 01.69	+1.24	14 42 01.69	37
13 33 [illegible]	[illegible] .184		—0 05.87	—0.31	13 33 12.05	38
13 42 [illegible]	[illegible] .279		.88		13 42 36.06	*39
13 46 [illegible]	[illegible] .089	—0 05.80	.88		13 47 03.69	40
13 53 [illegible]	[illegible] .149		.88		13 53 29.83	41
13 57 [illegible]	[illegible] .296		.88		13 57 16.80	42
14 [illegible]	[illegible] .189		.88		14 04 21.33	43
14 [illegible]	[illegible]		.88		14 10 27.08	44
14 [illegible]	[illegible]		.88		14 18 48.42	45
[illegible]	[illegible]		.88		14 24 55.94	46
[illegible]	[illegible]		.88		14 31 19.24	47
[illegible]	[illegible]	[illegible]5.92	—0 05.88	—0.31	14 37 59.93	48

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	June 22	α^2 Libræ	° 3	−15°22′	5.0	30.5	14 41 55.5	20.8	46.0
2	cont'd.	Moon I	(11.5)	−20 46	9.8	37.1	14 49 03.5	30.0	56.7
3		20 Libræ	3.4	−24 38	43.0	9.7	14 54 36.5	3.0	30.0
4		ι^1 Libræ	5.6	−19 10	9.2	35.0	15 03 00.7	26.5	52.2
5	23	α Centauri		+38 48	2.7	34.2	14 13 05.5	36.6	8.0
6		ρ Bootis	4	+31 05	53.5	22.0	14 24 50.3	18 8	47.2
7		α Lupi	3	−46 41	2.0	37.5	14 31 13.0	48.5	24.0
8		20 Libræ	3.4	−24 38	42.5	9.5	14 54 36.2	3.0	30.0
9		ι^1 Libræ	5.6	−19 10	8.6	34.4	15 03 00.1	25.8	51.5
10		β Cor. Bor.	4	+29 40	12.3	40.5	15 21 08.3	36.0	4.5
11		α Cor. Bor.	2	+27 16	54.0	21.8	15 27 49.0	16.8	44.0
12		*h* Lupi	6	−36 54	8.0	38.5	15 32 08.9	39.0	10.2
13		Moon I	(12.5)	−24 28	24.6	52.5	15 40 20.0	47.2	15.0
14		ρ Scorpii	4	−28 44	58.5	26.5	15 46 54.2	22.0	49.8
15		π Scorpii	3.4	−25 38	11.6	37.3	15 49 04.8	31.8	58.5
*16		β^1 Scorpii	2	−19 21	10.2	35.8	15 56 01.5	27.7	53.5
17		ν^1 Scorpii	4	−19 02	44.2	9.5	16 02 35.3	1.2	27.5
18		δ Ophiuchi	3	− 3 16	2.5	27.0	16 05 51.5	16.0	40.5
19		σ Scorpii	4	−25 12	28.0	54.7	16 11 21.5	48.3	16.0
20	25	ν^1 Scorpii	4	−19 02	42.2	8.0	16 02 33.5	59.2	25.0
21		δ Ophiuchi	3	− 3 16	0.5	25.0	16 05 49.5	14.0	38.8
22		σ Scorpii	4	−25 12	26.1	53.2	16 11 19.5	46.5	13.5
23		γ Herculis	3.4	+19 32	52.5	18.5	16 14 44.0	10.0	36.0
24		α Scorpii	1	−26 04	34.0	1.0	16 19 28.0	55.0	22.2
25		β Herculis	2.3	+21 49	20.7	47.0	16 23 13.0	39.2	5.3
26		ζ Ophiuchi	3.4	−10 14	23.7	48.3	16 28 13.0	37.6	2.5
27		ε Scorpii	3	−34 00	42.0	11.0	16 39 40.5	10.0	39.5
28		ι Ophiuchi	4	+10 26	29.0	54.0	16 46 18.5	43.2	7.8
29		κ Ophiuchi	4	+ 9 38	8.5	33.5	16 49 58.0	22.5	47.5
30		ε Herculis	3	+31 10	6.2	34.8	16 54 03.0	31.5	0.2
31		η Scorpii	4	−43 01	28.0	1.5	17 00 34.7	8.0	41.5
*32		A Ophiuchi	4.5	−26 21	28.5	56.0	17 05 22.0	50.0	17.5
33		θ Ophiuchi	3.4	−24 50	9.8	36.0	17 12 03.2	30.2	57.3
34		*d* Ophiuchi	5	−29 43	4.5	33.0	17 17 00.8	28.5	57.0
35		Moon I	(14.6)	−28 17	59.5	28.5	17 32 57.0	25.5	54.5
36		*p* Sagittarii	5	−27 46	26.5	54.0	17 37 21.5	49.0	16.5
37		ν Ophiuchi	4	− 9 45	16.0	40.6	17 50 05.3	30.0	55.0
*38	28	6 Vulpeculæ	4	+24 21	1.7	28.5	19 21 55.2	21.8	49.0
*39		h^2 Sagittarii	4.5	−25 14	56.0	23.0	19 26 49.8	16.5	43.2
40		φ Cygni	4	+29 47	0.0	28.0	19 32 56.0	24.0	52.2
41		γ Aquilæ	3	+10 14	41.5	6.5	19 38 31.0	55.5	20.5
42		57 Sagittarii	5.6	−19 27	53.6	19.6	19 42 45.5	11.2	37.2
43		*c* Sagittarii	4.5	−28 09	45.3	13.0	19 52 40.5	8.0	35.7
44		θ Aquilæ	3.4	− 1 17	5.8	30.2	20 02 54.6	19.0	43.5
45		α^1 Capricorni	4	−13 00	48.0	13.0	20 08 38.0	3.0	28.2
46		α^2 Capricorni	3	−13 02	12.0	37.0	20 09 02.0	27.0	52.2
47		π Capricorni	5	−18 44	9.5	35.5	20 18 01.0	26.5	52.5
48		*i* Cygni	4.5	+29 50	47.7	15.8	20 22 43.8	12.0	40.0
49		Moon II	(17.7)	−22 30	49.0	16.5	20 31 43.5	10.5	38.0
50		ψ Capricorni	4.5	−25 50	34.2	1.5	20 36 28.2	55.5	22.5

June 23.—☽ ☌ *b* Scorpii.
25.—Examined adjustments.

REDUCTION TO APPARENT RIGHT ASCENTIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	41	55.56	+ .210	—0	05.91	—0	05.88	—0.31	14	42	01.65	*1
14	49	03.42	+ .231				.89		14	49	09.54	2
14	54	36.44	+ .246				.89		14	54	42.58	3
15	03	00.72	+ .225			—0	05.89	—0.31	15	03	06.84	4
14	13	05.40	+ .933			—0	05.78	+0.12	14	13	12.11	5
14	24	50.36	+ .119				.77		14	24	56.25	6
14	31	13.00	+1.090				.77		14	31	19.86	7
14	54	36.24	+ .738				.77		14	54	42.75	8
15	03	00.08	+ .674				.77		15	03	06.52	9
15	21	08.32	+ .142				.77		15	21	15.23	10
15	27	49.12	+ .169		05.76		.77		15	27	55.06	11
15	32	08.92	+ .909				.77		15	32	15.60	12
15	40	19.86	+ .744				.77		15	40	26.37	13
15	46	54.20	+ .789				.77		15	47	00.76	14
15	49	04.80	+ .762				.77		15	49	11.33	15
15	56	01.74	+ .675		05.76		.77		15	56	08.18	*16
16	02	35.54	+ .672				.77		16	02	41.98	17
16	05	51.50	+ .454	—0	05.78		.77		16	05	57.72	18
16	11	21.70	+ .745			—0	05.77	+0.12	16	11	28.21	19
16	02	33.58	+ .601			—0	07.35	—0.78	16	02	41.53	20
16	05	49.56	+ .449	—0	07.73		.35		16	05	57.36	21
16	11	19.76	+ .663				.36		16	11	27.78	22
16	14	41.20	+ .235				.36		16	14	51.79	23
16	19	28.04	+ .672	—0	07.32		.36		16	19	36.07	24
16	23	13.04	+ .211				.36		16	23	20.61	25
16	28	13.02	+ .514				.36		16	28	20.89	26
16	39	40.60	+ .865				.37		16	39	48.83	27
16	46	18.50	+ .323				.37		16	46	26.19	28
16	49	58.00	+ .244				.37		16	50	05.61	29
16	54	03.14	+ .105				.38		16	54	10.62	30
17	00	34.74	+ .903				.38		17	00	43.02	31
17	05	23.00	+ .675				.38		17	05	31.05	*32
17	12	03.30	+ .659				.39		17	12	11.35	33
17	17	00.76	+ .714				.39		17	17	08.86	34
17	32	57.00	+ .697				.40		17	33	05.10	35
17	37	21.50	+ .691				.40		17	37	29.59	36
17	50	05.38	+ .508			—0	07.41	—0.78	17	50	13.29	37
19	21	55.24	+ .069			—0	07.96	—0.48	19	22	03.27	*38
19	26	49.70	+ .248				.96		19	26	57.91	*39
19	32	56.04	+ .045				.96		19	33	04.05	40
19	38	31.00	+ .122	—0	08.09		.97		19	38	39.09	41
19	42	45.42	+ .226				.97		19	42	53.62	42
19	52	40.50	+ .261				.97		19	52	48.73	43
20	02	54.62	+ .161				.98		20	03	02.76	44
20	08	38.04	+ .201				.98		20	08	46.22	45
20	09	02.04	+ .202	—0	07.94		.98		20	09	10.22	46
20	18	01.00	+ .223				.98		20	18	09.20	47
20	22	43.86	+ .044				.98		20	22	51.88	48
20	31	43.50	+ .237				.98		20	31	51.72	49
20	36	28.38	+ .251			—0	07.98	—0.48	20	36	36.61	50

No. 1.—a^1 Libræ preceded this star 12*s*.
16.—A double star; the observation somewhat doubtful.
32.—A double star, each estimated 5th magnitude.
38.—Two stars in the field.
39.—Recorded h^1 Sagittarii.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 28	α Microscopi	4.5	—34°22′	50.5	20.0	20 39 49.5	19.0	48.5
2	cont'd.	γ Microscopi		—32 51	22.0	51.0	20 51 19.7	48.5	17.8
3		θ Capricorni	5.6	—17 52	57.0	22.7	20 56 48.2	14.0	39.5
4		ζ Cygni	3	+29 34	3.7	31.5	21 05 59.7	27.5	56.0
5	29	β Delphini	4	+14 02	3.5	28.5	20 29 53.5	18.5	44.0
6		ψ Capricorni	4.5	—25 50	34.0	1.0	20 36 28.0	55.0	22.3
7		α Microscopi	4.5	—34 22	50.0	19.5	20 39 49.0	18.5	48.5
8		μ Aquarii	4.5	— 9 35	2.8	27.5	20 43 52.0	16.5	41.5
9		γ Microscopi		—32 51	21.0	50.5	20 51 19.3	48.2	17.5
10		θ Capricorni	5.6	—17 52	56.5	22.2	20 56 47.7	13.2	39.0
11		ζ Cygni	3	+29 34	2.5	31.2	21 05 59.0	27.0	55.2
12		ε Pegasi	4	+19 07	41.0	6.5	21 14 32.3	58.3	24.0
13		ζ Capricorni	4	—23 06	29.5	56.2	21 17 22.7	48.8	15.5
14		Moon II	(18.7)	—17 44	56.0	22.5	21 26 48.5	14.5	41.0
15		δ Capricorni	3.4	—16 51	12.2	37.8	21 38 03.0	28.5	54.2
16		γ Gruis	4	—38 07	2.8	34.0	21 44 04.5	35.5	6.5
17		η Piscis Aus.	6	—29 13	33.0	1.5	21 51 29.0	57.2	25.5
18		ι Aquarii	4.5	—14 40	48.0	13.5	21 57 38.2	3.5	29.0
19	30	α Scorpii	1	—26 04	31.5	58.8	16 19 25.5	52.8	20.0
20		ε Scorpii	3	—34 00	39.3	8.5	16 39 38.0	7.5	37.0
21		ε Herculis	5	+31 10	3.5	32.0	16 54 00.5	29.0	57.5
22		η Scorpii	4	—43 01	25.0	58.5	17 00 31.7	5.0	38.5
23		γ Capricorni	3	—17 23	10.8	36.5	21 31 01.5	27.2	53.0
24		ε Pegasi	2.3	+ 9 09	19.0	44.0	21 36 08.5	53.0	57.6
25		δ Capricorni	3.4	—16 51	9.5	35.5	21 38 00.5	26.2	52.0
26		γ Gruis	4	—38 07	0.2	31.5	21 44 02.0	33.2	4.5
27		η Piscis Aus.	6	—29 13	30.5	59.0	21 51 26.5	54.5	23.0
28		ι Aquarii	4.5	—14 40	45.5	11.0	21 57 36.2	1.3	26.5
*29		2656 A. S. C.	6	— 9 50	24.0	49.2	22 08 13.7	38 3	3.5
30		γ Aquarii	4	— 2 11	23.0	47.5	22 13 12.0	36.5	1.0
31		Moon II	(19.7)	—12 02	36.0	1.7	22 19 27.1	52.5	18.2
32		σ Aquarii	5	—11 30	9.0	34.0	22 21 58.8	23.5	48.0
33		η Aquarii	4	— 0 56	7.5	32.0	22 26 56.5	21.0	45.5
34		ε Piscis Aus.	4	—27 53	41.2	9.0	22 31 36.3	3.8	31.5
35		μ Pegasi	4	+23 45	12.0	39.0	22 42 05.5	32.0	59.0
36		λ Aquarii	4	— 8 26	15.0	39.5	22 44 04.0	28.5	53.0
37		α Piscis Aus.	1	—30 28	40.0	8.5	22 48 36.5	5.0	33.2
38		β Pegasi	2	+27 12	55.0	22.5	22 55 50.0	17.5	45.0
39	July 4	ε Bootis	3	+27 45	38.6	6.2	14 37 33.5	1.0	28.7
*40		α^2 Libræ	3	—15 22	44.2	9.5	14 41 34.8	0.2	25.5
41		χ Centauri	3	—41 27	15.0	47.5	14 48 19.8	52.0	25.0
42		20 Libræ	3.4	—24 39	22.7	50.0	14 54 16.5	43.2	10.5
43		β Cor. Bor.	4	+29 40	51.5	19.8	15 20 48.0	16.2	44.5
44		α Cor. Bor.	2	+27 16	34.5	2.2	15 27 29.2	56.5	24.0
45		h Lupi	6	—36 54	48.0	18.5	15 31 48.5	19.0	49.5
46	5	α Lupi	3	—46 41	43.0	18.5	14 30 53.7	29.0	4.5
*47		α^2 Libræ	3	—15 22	46.0	11.3	14 41 36.5	1.6	27.0
48		χ Centauri	3	—41 27	16.0	48.5	14 48 20.5	53.5	26.0
49		20 Libræ	3.4	—24 39	23.6	50.5	14 54 17.3	44.0	11.3

June 29.—Adjusted the transit instrument.
July 2.—Stopped the clock, and added one ounce of mercury to the cistern of the pendulum.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
20	39	49.50	+ .290			—0	07.98	—0.48	20	39	57.77	1
20	51	19.80	+ .282				.99		20	51	28.07	2
20	56	48.28	+ .220				.99		20	56	56.49	3
21	05	59.68	+ .047	—0	07.92	—0	07.99	—0.48	21	06	07.72	4
20	29	53.60				—0	08.66	—0.71	20	30	02.26	5
20	36	28.06					.66		20	36	36.72	6
20	39	49.10					.66		20	39	57.76	7
20	43	52.06					.66		20	44	00.72	8
20	51	19.30					.67		20	51	27.97	9
20	56	47.72					.67		20	56	56.39	10
21	05	58.98		—0	08.70		.67		21	06	07.65	11
21	14	32.46					.68		21	14	41.14	12
21	17	22.54					.68		21	17	31.22	13
21	26	48.50					.69		21	26	57.19	14
21	38	03.14					.69		21	38	11.83	15
21	44	04.66					.69		21	44	13.35	16
21	51	29.24					.70		21	51	37.94	17
21	57	38.44				—0	08.70	—0.71	21	57	47.14	18
16	19	25.72		—0	10.32	—0	10.45	—2.41	16	19	36.17	19
16	39	38.06					.48		16	39	48.54	20
16	54	00.50					.51		16	54	11.01	21
17	00	31.74					.51		17	00	42.25	22
21	31	01.80					.97		21	31	12.77	23
21	36	08.42			10 89		.98		21	36	19.40	24
21	38	00.74					.98		21	38	11.72	25
21	44	02 28					.99		21	44	13.27	26
21	51	26.70					11.00		21	51	37.70	27
21	57	36.10					.01		21	57	47.11	28
22	08	13.74					.03		22	08	24.77	*29
22	13	12.00					.04		22	13	23.04	30
22	19	27.10					.05		22	19	38.15	31
22	21	58.78					.05		22	22	09.83	32
22	26	56.50					.06		22	27	07.56	33
22	31	36.36					.07		22	31	47.43	34
22	42	05.50					.09		22	42	16.59	35
22	44	04.00					.09		22	44	15.09	36
22	48	36.64		—0	10.59		.09		22	48	47.73	37
22	55	50.00				—0	11.11	—2.41	22	56	01.11	38
14	37	33.60	+ .109	—0	26.13	—0	25.86	+0.71	14	37	59.57	39
14	41	34.84	+ .420		26.35		.86		14	42	01.12	*40
14	48	19.86	+ .658				.86		14	48	46.38	41
14	54	16.58	+ .492				.85		14	54	42.87	42
15	20	48.00	+ .092				.84		15	21	13.93	43
15	27	29.24	+ .113	—0	25.62		.84		15	27	55.19	44
15	31	48.70	+ .606			—0	25.83	+0.71	15	32	15.14	45
14	30	53.74	+ .262			—0	25.01	+3.18	14	31	19.01	46
14	41	36.48	+ .151	—0	24.97	—0	24.99		14	42	01.62	*47
14	48	20.90	+ .237				.98		14	48	46.12	48
14	54	17.34	+ .159			—0	24.96	+3.18	14	54	42.46	49

No. 29. Recorded θ Aquarii.
40. α' Libræ preceded 11*s*.30.
47. α' Libræ preceded 11*s*.55.

TRANSITS OBSERVED AT WASHINGTON IN 1839

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 5	β Cor. Bor.	3.4	+29°40′	53.6	21.5	15 20 49.0	17.0	44.8
2	cont'd.	α Cor. Bor.	2	+27 16	35.5	2 5	15 27 30.0	57.5	24.5
3		h Lupi	6	−36 54	49.0	19.5	15 31 50.0	20.5	51.0
4		μ Serpentis	3.4	− 2 55	2.0	26.5	15 40 51.0	15.5	40.0
5	7	20 Libræ	3.4	−24 39	34.5	1.5	14 54 28.5	55.5	22.5
6		β Cor. Bor.	3.4	+29 40	4.5	32.5	15 21 00.5	28.5	56.5
7		α Cor. Bor.	2	+27 16	46.5	14.3	15 27 41.6	8.8	36.4
8		h Lupi	6	−36 54	59.8	30.5	15 32 01.0	31.5	2.2
9		μ Serpentis	3.4	− 2 55	13.5	38.0	15 41 02.5	27.0	51.5
10		ν^1 Scorpii	4	−19 02	39.5	5.5	16 02 31.0	56.7	22.6
11		σ Scorpii	4	−25 12	23.7	50.9	16 11 17.5	44.0	11.2
12		γ Herculis	4	+19 32	49.8	15.8	16 14 41.2	7.0	33.0
13		α Scorpii	1	−26 04	31.5	58.3	16 19 25.0	52.7	19.6
14		β Herculis	3	+21 49	17.8	44.0	16 23 10.0	36.3	3.0
15		ζ Ophiuchi	3.4	−10 14	20.5	45.5	16 28 10.2	35.0	0.0
16		ε Scorpii	3	−34 00	39.2	8.8	16 39 37.6	7.2	37.0
17		κ Ophiuchi	4	+ 9 38			16 49 55.3	20.0	44.5
*18		ε Herculis	6	+31 10	3.2	32.0	16 54 00.0	28.5	57.0
19		η Scorpii	3	−43 01	25.5	58.6	17 00 31.7	5.0	38.5
*20	10	ρ Scorpii	4	−28 44	54.5	22.5	15 46 50.0	17.1	45.5
21		δ Scorpii	3	−22 09	49.3	16.0	15 50 42.0	8.0	34.5
22		γ Herculis	3.4	+19 32	49.5	15.5	16 14 41.2	7 0	33.0
23		α Scorpii	1	−26 04	31.0	58.0	16 19 25.0	52.5	19.0
24		β Herculis	3	+21 49	17.5	44.0	16 23 10.0	36.3	2.8
25		ζ Ophiuchi	3.4	−10 14	20.5	45.5	16 28 10.0	34.6	59.5
26	11	λ Cor. Aus.	6	−38 29	30.3	3.0	18 32 35.5	7.5	39.2
27		φ Sagittarii	5	−27 10		0.5	18 35 27.2	54.5	
28		σ Sagittarii	3	−16 29	13.8	41.2	18 45 08.0	35.3	2.5
29		π Sagittarii	3.4	−21 06	10.0	36.5	19 00 02.5	28.5	55.0
30	15	δ Scorpii	3	−22 09	55.0	21.0	15 50 47.5	13.5	40.0
31		β^1 Scorpii	2	−19 21	11.0	37.0	15 56 03.0	29.0	55.0
32		ν^2 Scorpii	6	−19 —	44.0	10.0	16 02 36.0	2.0	27.5
33		ν^1 Scorpii	4	−19 02	45.5	11.5	16 02 37.2	3.0	29.0
34		σ Scorpii	4	−25 12	29.2	56.2	16 11 23.0	50.0	17.2
35		γ Herculis	4	+19 32	55.7	21.3	16 14 46.8	12.5	38.6
36		α Scorpii	1	−26 04	37.0	4.2	16 19 31.2	58.3	35.4
37		β Herculis	2.3	+21 49	23.5	49.5	16 23 15.6	41.8	8.3
38		ζ Ophiuchi	3.4	−10 14	26.0	51.2	16 28 15.6	40.5	5.0
39		ε Scorpii	3	−34 00	45.0	14.5	16 39 44.0	13.5	43.0
40		ι Ophiuchi	5	+10 26	32.0	56.8	16 46 21.5	46.2	11.0
41		κ Ophuichi	4	+ 9 38	11.5	36.4	16 50 01.0	25.6	50.4
*42		ε Herculis	6.7	+31 10	9.3	37.8	16 54 06.0	34.3	3.2
43		η Scorpii	3	−43 01	30.8	4.3	17 00 37.5	10.8	44.3
44	16	σ Scorpii	4	−35 12	30.0	57.2	16 11 24.0	51.0	18.0
45		γ Herculis	4	+19 32	57.0	22.5	16 14 48.0	13.5	39.2
46		α Scorpii	1	−26 04	38.0	5.0	16 19 32.2	59.0	26.5
47		β Herculis	3	+21 49	23.8	50.3	16 23 16.8	43.3	9.8

July 6.—☽ ☌ Pleiades. Examined the adjustments of the transit.
15.—No error of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
15 20 49.18	+ .033		—0 24.90	+ 3.18	15 21 14.11	1
15 27 30.00	+ .041	—0 24.92	.89		15 27 54.93	2
15 31 50 00	+ .218		.88		15 32 15.10	3
15 40 51.00	+ .121		—0 24.86	+ 3.18	15 41 15.98	4
14 54 28.50	+ .493		—0 13.22	+ 3.40	14 54 42.21	5
15 21 00.50	+ .101		.28		15 21 13.88	6
15 27 41.52	+ .118	—0 13.31	.30		15 27 54.94	7
15 32 01.00	+ .606		.31		15 32 14.92	8
15 41 02.50	+ .334		—0 13.33	+ 3.40	15 41 16.16	9
16 02 31.06	+ .242		—0 10.34	— 0.20	16 02 41.64	10
16 11 17.46	+ .268		.34		16 11 28.07	11
16 14 41.36	+ .095		.34		16 14 51.79	12
16 19 25.42	+ .272	—0 10.34	.34		16 19 36.03	13
16 23 10.22	+ .085		.34		16 23 20.64	14
16 28 10.24	+ .207		.34		16 28 20.79	15
16 39 37.96	+ .311		.34		16 39 48.61	16
16 49 55.30	+ .135		.34		16 50 05.77	17
16 54 00.14	+ .042		.34		16 54 10.52	*18
17 00 31.86	+ .365		—0 10.34	— 0.20	17 00 42.57	19
15 46 49.92	+ .281		—0 10.65	— 0.32	15 47 00.85	*20
15 50 41.96	+ .255		.66		15 50 52.87	21
16 14 41.24	+ .095		.66		16 14 51.99	22
16 19 25.10	+ .272	—0 10.66	.66		16 19 36.03	23
16 23 10.12	+ .085		.66		16 23 20.86	24
16 28 10.02	+ .207		—0 10.66	— 0 32	16 28 20.89	25
18 32 35.10	+ .337		—0 12.12	— 1.33	19 32 47.56	26
18 35 27.40	+ .276		.12		18 35 39.80	27
18 45 08.16	+ .231		.13		18 45 20.52	28
19 00 02.50	+ .250		—0 12.14	— 1.33	19 00 14.89	29
15 50 47.40	+ .189		—0 04.47	+ 1.05	15 50 52.06	30
15 56 03.00	+ .180	—0 04.95	.46		15 56 07.64	31
16 02 35.90	+ .179		.46		16 02 40.54	32
16 02 37.24	+ .179		.46		16 02 41.88	33
16 11 23.12	+ .199		.46		16 11 27.78	34
16 14 46.98	+ .070		.45		16 14 51.50	35
16 19 31.22	+ .201	—0 04.59	.45		16 19 35.87	36
16 23 15.74	+ .068		.45		16 23 20.25	37
16 28 15.66	+ .154		.45		16 28 20.26	38
16 39 44.00	+ .231		.44		16 39 48.67	39
16 46 21.50	+ .097		.43		16 46 26.03	40
16 50 00.98	+ .099		.43		16 50 05.51	41
16 54 06.12	+ .031		.42		16 54 10.57	*42
17 00 37.54	+ .271		—0 04.42	+ 1.05	17 00 42.23	43
16 11 24.04	+ .199		—0 03.67	+ 1.90	16 11 27.91	44
16 14 48.04	+ .070		.67		16 14 51.78	45
16 19 32.14	+ .201	—0 03.66	.66		16 19 36.02	46
16 23 16.80	+ .063		—0 03.66	+ 1.90	16 23 20.52	47

Nos. 18 and 42. It is probable that ε Herculis is not seen directly, but a portion of its light is reflected from the casing of the door in the roof; hence the magnitude.

No. 20. Recorded at transit over middle wire 15*h*. 45*m*.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 16	ζ Ophiuchi	3.4	—10°14′	27.0	52.2	16 28 16.6	41.3	6.8
2	cont'd.	ε Scorpii	3	—34 00	46.0	15.5	16 39 45.0	14.5	44.0
3		η Scorpii	3	—43 01	32.5	5.5	17 00 38.7	12.0	45.5
4	17	ν^2 Scorpii	6	—19 —	48.0	14.0	16 02 39.5	5.7	31.0
5		ν^1 Scorpii	4	—19 02	49.0	15.0	16 02 40.5	6.5	32.2
6		σ Scorpii	4	—25 12	33 0	0.0	16 11 27.0	53.8	21.0
7		γ Herculis	4.5	+19 32	59.2	25.0	16 14 50.6	16.4	42.5
8		α Scorpii	1	—26 04	40.5	7.8	16 19 35.0	2.0	29 4
9		β Herculis	3	+21 49	27.3	53.5	16 23 19.8	46.0	12.3
10		ζ Ophiuchi	3.4	—10 14	30.2	55.0	16 28 19.7	44.5	9.3
11		ε Scorpii	3	—34 00	48.7	18.2	16 39 47.8	16.6	46.2
12		ι Ophiuchi	5	+10 26	35.7	0 6	16 46 25.0	50.0	15.0
13		κ Ophiuchi	4	+ 9 38	15.4	40.3	16 50 04.8	29.3	54.5
14		ε Herculis	6	+31 10	12.8	41.5	16 54 09.9	38.3	7.0
15		η Scorpii	3	—43 01	34.7	8.2	17 00 41.3	14.5	48.0
*16		A Ophiuchi	5.6	—26 21	35.5	2.8	17 05 29.7	57.0	24.3
17		δ Herculis	3.4	+25 01	33.5	0.5	17 08 27.0	53.5	21.0
*18		θ Ophiuchi	4.5	—24 50	16.5	43.5	17 12 10.2	37.0	4.0
*19		d Ophiuchi	4.5	—29 43	12.0	39.6	17 17 07.5	35.7	3.3
20		λ Scorpii	2.3	—36 58	43.2	14.0	17 22 44 3	14.8	45.3
21	18	ε Scorpii	3	—34 00			16 39 54.0	23.5	52.5
22		ι Ophiuchi	5	+10 26	42.0	7.0	16 46 31.5	56 2	21.0
23		κ Ophiuchi	4	+ 9 38	21.7	46.5	16 50 11.0	35.7	0.5
24		ε Herculis	6	+31 10	19.5	48.0	16 54 16.3	44.8	13 2
*25		A Ophiuchi	5.6	—26 21	42.0	9.0	17 05 36.2	3.5	30.8
26		δ Herculis	3.4	+25 01	39 8	7.0	17 08 33.5	0.5	27.5
27		θ Ophiuchi	4	—24 50	23.2	50.0	17 12 16.7	43.3	10.5
28		d Ophiuchi	4.5	—29 43	17.8	46.3	17 17 14.0	42.0	10.2
29		λ Scorpii	2.3	—36 58	50.0	20.5	17 22 51.0	21.5	52.0
30		λ Herculis	4	+26 13			17 24 22.2	49.5	17.0
31	21	α Cor Bor.	2.3	+27 16	24.2	52.0	15 28 19.0	46.5	14.0
32		χ Libræ	5.6	—23 17	20.0	47.3	15 31 13.5	40.2	7.0
33		μ Serpentis	3.4	— 2 56	51.5	16.0	15 41 40.0	4.3	29.0
34		ρ Scorpii	4	—28 44	29.7	57.5	15 46 25.2	53.0	20.6
35		δ Scorpii	3	—22 09	24 5	50.6	15 51 16.7	43.0	9.3
*36		β^1 Scorpii	2	—19 21	41.0	6.8	15 56 32.4	58.0	24.0
*37		υ^1 Scorpii	4	—19 02	14.5	40.5	16 03 06.3	31.8	57.7
38		Moon I	(11.0)	—26 19	1.2	29.4	16 12 57.3	25.3	53.4
39		γ Herculis	3.4	+19 32			16 15 16.2	42.0	8.0
40		α Scorpii	1	—26 04	6.3	33.8	16 20 00.6	27.5	55.0
41		β Herculis	3	+21 49	52.5	19.0	16 23 45.0	11.2	37.6
42		τ Scorpii	3.4	—27 52			16 26 20.2	47.5	14.5
43	23	ϑ Ophiuchi	3.4	—24 50	53.0	20.1	17 12 47.1	14.1	41.0
*44		d Ophiuchi	5	—29 43	48 5	16.5	17 17 44.5	12.5	40.5
45		λ Scorpii	3	—36 58	20.5	51.2	17 22 21.6	52.0	23.0
46		λ Herculis	4.5	+26 13			17 24 52.5	20.0	47.5
47		κ Scorpii	3	—38 56	59.5	31.0	17 32 02.2	33.5	5.0
48		p Sagittarii	6	—27 46	10.5	38.2	17 38 05.5	33.2	1.0
49		μ Herculis	4	+27 48	53.5	21.2	17 40 48.6	16.0	44.0

July 21.—Adjusted the transit.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
16	28	16.78	+ .154			—0	03.65	+1.90	16	28	20.58	1
16	39	45.00	+ .231				.63		16	39	48.86	2
17	00	38.84	+ .271			—0	03.61	+1.90	17	00	42.72	3
16	02	39.64	+ .359			—0	00.70	+4.60	16	02	40.70	4
16	02	40.64	+ .359				.70		16	02	41.70	5
16	11	26.96	+ .397				.68		16	11	28.04	6
16	14	50.74	+ .141				.67		16	14	51.55	7
16	19	34.94	+ .403	—0	00.65		.65		16	19	35.99	8
16	23	19.78	+ .126				.64		16	23	20.55	9
16	28	19.71	+ .307				.62		16	28	20.67	10
16	39	47.50	+ .461				.59		16	39	48.55	11
16	46	25.30	+ .199				.56		16	46	26.06	12
16	50	04.86	+ .198				.55		16	50	05.61	13
16	54	09.90	+ .082				.54		16	54	10.52	14
17	00	41.34	+ .542				.52		17	00	42.40	15
17	05	29.86	+ .405				.50		17	05	30.77	*16
17	08	27.10	+ .106				.49		17	08	27.70	17
17	12	10.24	+ .395				.48		17	12	11.12	*18
17	17	07 62	+ .428				.47		17	17	08.52	*19
17	22	44.32	+ .484			+0	00.45	+4.60	17	22	45.25	20
16	39	54.00	+ .461			+0	05.86	+6.45	16	39	48.60	21
16	46	31.54	+ .199				.89		16	46	25.85	22
16	50	11.08	+ .198				.90		16	50	05.38	23
16	54	16.36	+ .082				.91		16	54	10.53	24
17	05	36.30	+ .405				.95		17	05	30.76	*25
17	08	33.66	+ .106				.96		17	08	27.81	26
17	12	16.74	+ .395				.97		17	12	11.16	27
17	17	14.06	+ .428				.98		17	17	08.51	28
17	22	51.00	+ .484				06.00		17	22	45.48	29
17	24	22.20	+ .097			+0	06.01	+6.45	17	24	16.29	30
15	28	19.14	— .034	+0	24.32	+0	24.31	+6.00	15	27	54.80	31
15	31	13.60	— .144				.32		15	30	49.14	32
15	41	40.16	— .101				.37		15	41	15.69	33
15	46	25.20	— .159				.39		15	46	00.65	34
15	51	16.82	— .142				.41		15	50	52.27	35
15	56	32.44	— .135		24.21		.43		15	56	07.87	*36
16	03	06.16	— .132				.46		16	02	41.57	*37
16	12	57.32	— .152				.49		16	12	32.68	38
16	15	16.20	— .053				.51		16	14	51.64	39
16	20	00.64	— .152	+0	24.52		.53		16	19	35.96	40
16	23	45.06	— .047				·54		16	23	20.47	41
16	26	20.20	— .157			+0	24.55	+6.00	16	25	55.49	42
17	12	47.06	— .148			+0	35.96	+5.70	17	12	10.95	43
17	17	44.50	— .160				.98		17	17	08.36	*44
17	22	21.66	— .182				36.00		17	22	45.48	45
17	24	52.50	— .036				.01		17	24	16.45	46
17	32	02.24	— .187				.04		17	31	26.01	47
17	38	05.68	— .154				.06		17	37	29.47	48
17	40	48.66	— .033			+0	36.07	+5.70	17	40	12.56	49

Nos 16 and 25. A double star.
18, 19, and 44. Two stars in the field.
36. β^2 followed this star 10s.65.
37. ν^2 Preceded this star 1s.65. The intervals were measured by a micro-chronometer.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 23	ν Ophiuchi	4	— 9°44′	59.5	24.5	17 50 50.2	13.8	38.8
2	cont'd.	γ² Sagittarii	4	—30 25	12.0	40.2	17 56 08.5	36.5	5.0
3		ϑ² Ophiuchi	4.5	+ 9 33	32.5	57.5	18 00 22.0	46.6	11.5
4		μ¹ Sagittarii	4	—21 06	56.0	22.0	18 04 48.0	14.0	40.2
5		Moon I	(13.1)	—28 20	2.3	31.2	18 08 59.6	28.2	57.2
6		δ Sagittarii	3.4	—29 53	25.0	53.5	18 11 21.5	49.5	18.0
7		λ Sagittarii	4	—25 31	48.3	15.5	18 18 42.3	9 2	36 5
8		φ Sagittarii	4.5	—27 09	21.2	49.0	18 36 16.0	43.3	11.0
9		σ Sagittarii	3	—26 30	2.8	30.0	18 45 57.2	24.5	52.0
10	25	6 Vulpeculæ	4	+24 21	36.2	3.0	19 22 29.8	56.7	23.5
11		γ Aquilæ	3	+10 14	16.5	41.0	19 39 05.6	30.2	54.7
12		α Aquilæ	1.2	+ 8 27	35.8	0.2	19 43 24.9	49.6	14.5
13		c Sagittarii	4.5	—28 09	20.5	48.5	19 53 15.7	43.2	11.0
14		θ Aquilæ	3.4	— 1 17	40.5	5.0	20 03 29.3	53.6	18.0
15		Moon I	(15.2)	—23 58	7.0	34.5	20 08 01.9	29.5	57.2
16		ι Cygni	4.5	+29 50	22.3	50.5	20 23 18.3	46.5	14.8
17		β Delphini	5	+14 02	39.0	4.3	20 30 29.3	54.3	19.5
18		ψ Capricorni	4.5	—25 50	9.5	36.7	20 37 03.7	30.7	58.0
19	26	h² Sagittarii	4.5	—25 12	31.0	58.2	19 27 25.0	52.0	19.0
20		φ Cygni	5	+29 47	34.8	3.2	19 33 30.7	58.5	27.2
21		γ Aquilæ	3	+10 14	16.5	41.2	19 39 05.6	30.3	55.5
22		c Sagittarii	4.5	—28 09			19 53 16.1	43.8	11.5
23		θ Aquilæ	3.4	— 1 17	41.0	5.5	20 03 29.7	54.1	18.5
24		π Capricorni	5	—18 43	45.0	10.8	20 18 36.5	2.2	28.0
25		β Delphini	4	+14 02	39.2	4.5	20 30 29.5	54.5	19.8
26	30	α Herculis	3.4	+14 33	59.0	24.5	17 08 49.5	14.5	40.0
27		θ Ophiuchi	3.4	—24 50	46.0	13.2	17 13 39.5	6.5	33.5
28		d Ophiuchi	5	—29 43	41.3	9.5	17 18 37.3	5.5	33.5
29		λ Herculis	4.5	+26 14	50.6	18.0	17 25 45.0	12.0	39.4
30	31	γ² Sagittarii	4	—30 25	53.5	22.0	17 56 50.0	18.2	46.7
31		ϑ² Ophiuchi	4	+ 9 33	14.1	39.0	18 01 03.6	28.2	53.0
32		δ Sagittarii	4	—29 53	7.0	35.2	18 12 03.0	31.3	59.5
33	Aug. 18	α Scorpii	1	—26 04	22.0	49.3	16 23 16.0	43.0	10.5
34		β Herculis	2.3	+21 51	8.8	32.0	16 22 58.0	24.2	30.5
35		ε Scorpii	3	—24 00	27.5	57.0	16 39 26.0	55.5	25.0
36		Moon I	(9.6)	—27 37	11.7	40.3	16 44 08.5	37.0	5.5
37		ε Herculis	4.5	+31 10	51.2	19.8	16 53 48.1	16.3	45.3
38		η Ophiuchi	3	—15 31	59.7	24.8	17 00 50.0	15.3	40.5
39		A Ophiuchi	4.5	—26 22	14.2	41.5	17 05 08.8	36.0	3.3
40		δ Herculis	4	+25 02	12.1	39.0	17 08 05.8	32.5	0.0
41		θ Ophiuchi	3.4	—24 50	55.7	22.8	17 11 49.2	16.0	43.2
42	19	α Scorpii	1	—26 04	33.5	1.0	16 19 28.0	55.0	22.5
43		ε Scorpii	3	—24 00	18.4	48.0	16 39 17.2	46.5	16.0
44		ε Herculis	4.5	+31 10	42.1	10.6	16 53 39.0	7.5	36.0
45		η Ophiuchi	3	—15 31	50.0	15.5	17 00 40 5	5.5	31.2
46		A Ophiuchi	4.5	—26 22	5.0	32.3	17 04 59.4	26.6	54.0
47		d Ophiuchi	5	—29 42	41.0	9.4	17 16 37.2	5.0	33.5

July 25.—The adjustments of the transit were examined, and pendulum lengthened three divisions.
30.—Mr. Montandon altered the weight, by suspending it outside of the case, and increasing it.

Aug. 18.—After observing α Scorpii, stopped clock four minutes.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
17	50	50.36	— .114			+0	36.11	+ 5.70	17	50	14.14	1
17	56	08.44	— .162				.13		17	55	32.15	2
18	00	22.02	— .074				.15		17	59	45.80	3
18	04	48.04	— .139	+0	36.00		.16		18	04	11.74	4
18	08	59.70	— .157				.18		18	08	23.36	5
18	11	21.50	— .160				.19		18	10	45.15	6
18	18	42.36	— .150				.22		18	18	05.99	7
18	36	16.10	— .154				.29		18	35	39.66	8
18	45	57.30	— .152			+0	36 32	+ 5.70	18	45	20.83	9
19	22	29.84	— .292			+0	25.52	+ 0.30	19	22	04.03	10
19	39	05.60	— .627	+0	25.45		.52		19	38	39.45	11
19	43	25.00	— .519	+0	25.59		·52		19	42	58.96	12
19	53	15.78	—1.110				.52		19	52	49.15	13
20	03	29.28	— .685				.53		20	03	03.07	14
20	08	02.02	—1.035				.53		20	07	35.46	15
20	23	18.48	— .192				.53		20	22	52.76	16
20	30	29.28	— .461				.53		20	30	03.29	17
20	37	03.72	—1.068			+0	25.53	+ 0.30	20	36	37.12	18
19	27	25.04				+0	26.59	+ 1.00	19	26	58.45	19
19	33	30.98					.59		19	33	04.29	20
19	39	05.82		+0	26.29		.60		19	38	39.22	21
19	53	16.10					.61		19	52	49.49	22
20	03	29.76					.61		20	03	03.17	23
20	18	36.50					.62		20	18	09.88	24
20	30	29.50				+0	26.64	+ 1.00	20	30	02.86	25
17	08	49.50	— .234	+1	27.92	+1	28.24	— 9.83	17	07	21.03	26
17	13	39.74	— .543				.21		17	12	10.99	27
17	18	37.42	— .581				.18		17	17	08.66	28
17	25	45.00	— .132			+1	28.13	— 9.83	17	24	16.74	29
17	56	50.08				+1	18.07	—10.00	17	55	32.01	30
18	01	03.58					.02		17	59	45.56	31
18	12	03.20				+1	17.94	—10.00	18	10	45.26	32
16	23	16.16		+3	40.51	+3	40.51	+12.00	16	19	35.65	33
16	22	58.10				—0	22.22		16	23	20.32	34
16	39	26.20					.06		16	39	48.26	35
16	44	08.60					22·02		16	44	30.62	36
16	53	48.14					21.95		16	54	10.09	37
17	00	50.06					.89		17	01	11.95	38
17	05	08.76					.84		17	05	30.60	39
17	08	05.88					.82		17	08	27.70	40
17	11	49.38				—0	21.79	+12.00	17	12	11.17	41
16	19	28.00	+ .232	—0	07.42	—0	07.42	— 6.10	16	19	35.65	42
16	39	17.22	+ .222				30 84		16	39	48.28	43
16	53	39.04	+ .035				.90		16	54	09.98	44
17	00	40.54	+ .193				.93		17	01	11.66	45
17	04	59.46	+ .233				.94		17	05	30.63	*46
17	16	37.22	+ .245			—0	30.99	— 6.10	17	17	08.46	47

August 19.—Examined transit adjustments, and lengthened the clock pendulum twelve divisions, after observing α Scorpii.

No. 46. A double star.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Aug. 19	λ Herculis	4.5	+26°14′	51.0	18.5	17 23 45.2	12.0	39.8
2	cont'd.	β Ophiuchi	3	+ 4 38	14.0	38.5	17 35 03.0	27.5	52 0
3		Moon I	(10.6)	−28 32	42.5	11.2	17 41 39.7	8.5	37.3
4		2053 A. S. C.	5.6	+26 05	32.5	59.7	17 48 27.0	54.0	21.3
5		γ² Sagittarii	4	−30 25	4.2	33.0	17 55 01.0	29.0	57.5
6		ο Herculis	4	+28 45	51.2	19.5	18 00 47.0	4.6	42.8
7		μ¹ Sagittarii	3.4	−21 06	48.5	14.5	18 03 40.5	6.5	32.5
8		t Herculis	6	+28 47	20.0	48.0	18 14 15.3	43.3	11.3
9	23	β Aquilæ	3.4	+ 6 00	42.2	6.8	19 46 31.3	55.6	20.1
*10		η Capricorni	5	−20 29			20 54 22.0	47.2	
11		ι Capricorni	5	−17 31	33.0	59.0	21 12 24.0	49.5	15.5
12		β Aquarii	3	− 6 16	23.0	47.5	21 22 12.0	36.5	1.0
13		γ Capricorni	4	−17 23	26.3	52.0	21 30 17.4	42.8	8.5
14		Moon I	(14.8)	−16 30	48.0	14.4	21 34 40.3	6.3	32.7
15		2597 A. S. C.	5	+29 25	54.5	22.5	21 41 50.3	18.6	46.6
16		B Pegasi	5.6	+25 10	57.5	24.5	21 44 51.3	18.0	45.0
17	24	ε Capricorni	5	−20 11	13.5	39.5	21 27 05.5	31.5	57.5
18		γ Capricorni	4	−17 23	20.7	46.2	21 30 11.6	37.0	2.7
19		ι Piscis Aus.	4.5	−33 45	24.3	53.8	21 34 23.0	52.2	21.7
20		δ Capricorni	3.4	−16 51	19.6	45.5	21 37 10.7	36.0	1.7
21		2597 A. S. C.	5	+29 25			21 41 44.7	12.5	40.5
22		B Pegasi	5.6	+25 10	51.5	18.6	21 44 45.5	12.5	39.5
23		ι Aquarii	4.5	−14 39	55.5	20.7	21 56 46.0	11.2	36.5
24		C Pegasi	5.6	+27 31	0.0	27.5	22 12 54.8	22.0	50.0
25		η Aquarii	4	− 0 57	17.5	42.0	22 26 06.3	30.7	55.0
26		Moon II	(15.8)	−10 16	14.3	39.8	22 31 05.1	30.4	55.8
27	25	η Pegasi	3	+29 23	27.0	55.0	14 11 22.7	50.4	18.5
28		λ Aquarii	4	− 8 26	17.5	42.0	14 20 06.5	31.0	55.5
29		α Piscis Aus.	1	−30 28	42.3	10.6	14 24 33.5	6.7	35 0
30		Moon II	(16.8)	− 3 23	56.0	20.7	15 00 45.5	10.3	35.5
31		s Pegasi	6.7	+17 30	44.6	10.3	15 05 35.5	1.2	26.8
32		φ Pegasi	6	+18 13			15 20 02.0	27.5	53.5
33		ψ Pegasi	5.6	+24 14	23.5	50.2	15 25 16.8	43.3	10.0
34		q Piscium	5.6	− 3 55	28.0	58.2	15 29 16.8	41.0	5.5
35	31	γ Aquilæ	3	+10 14	34.5	59.0	10 51 23.5	48.0	13.3
36		α Aquilæ	1.2	+ 8 27	53.5	18.0	10 55 42.5	7.0	31.5
37		β Aquilæ	3.4	+ 6 01	21.7	46.0	11 00 10.3	34.8	59.4
38		ε Eridani	4	−10 00	2.2	27.0	18 36 51.5	16.3	41.0
39		E Tauri	5	− 0 10	21.3	45.7	18 40 10.0	34.3	58.6
40		η Tauri	3	+23 36	31.5	58.2	18 49 24.5	50.8	17.5
41		γ¹ Eridani	2.3	−13 58	7.5	32.5	19 01 57.5	22.8	48.0
42		ψ Tauri	6	+28 34	34.5	2.5	19 08 30.0	57.5	25.5
43		ο Eridani	4.5	− 7 16	35.6	0.2	19 15 24.6	49.0	14.0
44		υ¹ Tauri	5	+22 27	10.3	36.6	19 28 03.2	29.8	56.0
45		β Orionis	1	− 8 23	13.0	37.5	20 18 02.0	26.5	51.5
46		Moon II	(23.1)	+28 16	46.6	5.2	20 25 33.5	1.8	30.3
47	Sept. 2	γ Aquilæ	3	+10 14	42.8	7.4	10 43 32.0	56.6	21.3
48		α Aquilæ	1.2	+ 8 27	1.8	26.3	10 47 50.8	15.4	39.9

August 23.—Adjusted the transit instrument.

25.—Discontinued the clock, from its irregularity. The observations on this and subsequent days were made by a mean time chronometer, No. 2110, Parkinson & Trodsham. Sidereal time at mean noon, Washington, 10*h*. 13*m*. 06*s*.51.

31.—The adjustments were examined.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
17	23	45.30	+ .056			—0	31.02	— 6.10	17	24	16.38	1
17	35	03.00	+ .129				.07		17	35	34.20	2
17	41	39.84	+ .240				.09		17	42	11.17	3
17	48	26.90	+ .057				.13		17	48	58.09	4
17	55	00.94	+ .248				.16		17	55	32.35	5
18	00	47.02	+ .046				.18		18	01	18.25	6
18	03	40.50	+ .212	—0	31.06		.19		18	04	11.90	7
18	14	15.58	+ .046			—0	31.22	— 6.10	18	14	47.25	8
19	46	31.20		—0	56.38	—0	56.05	— 5.77	19	47	27.25	9
20	54	22.00					.32		20	55	18.32	*10
21	12	24.20					.39		21	13	20.59	11
21	22	12.00		—0	56.42		.43		21	23	08.43	12
21	30	17.40					.46		21	31	13.86	13
21	34	40.34					.47		21	35	36.81	14
21	41	50.50					.51		21	42	47.01	15
21	44	51.26				—0	56.52	— 5.77	21	45	47.78	16
21	27	05.50				—1	02.21	— 5.75	21	28	07.71	17
21	30	11.64					.22		21	31	13.86	18
21	34	23 00					.24		21	35	25.24	19
21	37	10.70					.25		21	38	12.95	20
21	41	41.70					.27		21	42	46.97	21
21	44	45.52					.28		21	45	47.80	22
21	56	45.98					.33		21	57	48.31	23
22	12	54.86					.39		22	13	57.25	24
22	26	06.30					.45		22	27	08.75	25
22	31	05.08				—1	02.47	— 5.75	22	32	07.55	26
14	11	22.72	— .032			+1 51	00.18	+ 0.20	22	35	30.67	27
14	20	06.50	— .124				.18		22	44	15.80	28
14	24	38.62	— .181	+1 51	00.18		.18		22	48	48.59	29
15	00	45.60	— .112				.18		23	25	01.59	30
15	05	35.68	— .064				.18		23	29	52.51	31
15	20	02.00	— .062				.19		23	44	21.19	32
15	25	16.76	— .046				.19		23	49	36.83	33
15	29	16.90	— .113			+1 51	00.19	+ 0.20	23	53	37.56	34
10	51	23.66	+ .081	+1 50	58.88	+1 50	59.00	+ 1.20	19	38	39.39	35
10	55	42.50	+ .035		59 08		.00		19	42	58.92	36
11	00	10.44	+ .091		59.04		.00		19	47	27.59	37
18	36	51.60	+ .127				.45		3	25	23.37	38
18	40	09.98	+ .105				.45		3	28	42.10	39
18	49	24.50	+ .048		59.37		.46		3	37	58.24	40
19	01	57.66	+ .137		59.38		.47		3	50	33.54	41
19	08	30.00	+ .031				.48		3	57	06.85	42
19	15	24.68	+ .121				.49		4	04	02.73	43
19	28-	03.18	+ .051				.49		4	16	43.24	44
20	18	02.10	+ .123	+1 50	59.73		.54		5	06	50.39	45
20	25	33.48	+ .035			+1 50	59.55	+ 1 20	5	14	22.91	46
10	42	32.02	+ .081	+1 50	59.12	+1 50	59.17	+ 0.20	19	38	39.37	47
10	47	50.84	+ .085		59.23		59.17		19	42	58.89	48

No. 10. Misty.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.		Mag.	Declination.	I.	II.	III.	IV.	V.
						s.	s.	h. m. s.	s.	s.
1	Sept. 2	β	Aquilæ	3.4	+ 6°01′	30.0	54.3	10 52 18.7	43.0	7.5
2	15	γ	Aquilæ	3	+10 14	38.5	3.7	9 52 28.0	52.0	17.8
3		α	Aquilæ	1.2	+ 8 27	56.8	22 5	9 56 47.0	11.0	36.0
4		β	Aquilæ	3.4	+ 6 01	25.8	50.8	10 01 15.0	38.5	4.0
5	18		Moon I	(11.1)	—23 46	47.0	14.5	10 12 42.0	9.0	36.5
6		π	Capricorni	5	—18 44	15.0	41.0	10 20 06.0	32.0	57.5
7		ψ	Capricorni	4.5	—25 51	36.5	4.0	10 38 30.5	57.5	24.5
8	19	ψ	Capricorni	4.5	—25 51	42.0	9.0	10 34 36.0	3.0	29.5
9			Moon I	(12.2)	—19 24	15 5	42.0	11 06 08.5	35.0	1.5
10		β	Aquarii	3	— 6 16	11.0	35.0	11 20 59.5	24.0	48.0
11		δ	Capricorni	3.4	—16 51	11.5	37.5	11 36 03.0	28.0	53.0
12	20	ζ	Cygni	3	+29 34	11.0	39.0	11 00 07.0	35.0	3.0
13		γ	Capricorni	4	—17 23	18.0	44.0	11 25 08.8	34.5	59.8
14		δ	Capricorni	3.4	—16 51	15.5	42.0	11 32 06.0	32.0	56.5
15			Moon I	(13.2)	—13 29	7.5	33.0	11 56 58.5	24.0	50.0
16		θ	Aquarii	4.5	— 8 35	23.5	48.0	12 02 12.5	37.0	2.0
17		σ	Aquarii	5	—11 30	8.5	33.5	12 15 58.0	22.5	47.5
18	22	φ	Aquarii	5	— 6 55	2.0	26.8	12 51 51.0	15.5	40.0
19			Moon I	(15.3)	+ 0 22	12.3	37.5	13 36 02.0	26.5	52.0
20		d	Piscium	5.6	— 7 18	11.0	35.5	13 58 00.0	24.3	49.0
21	26	γ	Aquilæ	3	+10 14	29.0	53.7	9 09 18.2	42.8	7.5
22		α	Aquilæ	1.2	+ 8 27	47.8	12.5	9 13 37.0	1.5	26.2
23		β	Aquilæ	4	+ 6 01	15 7	40.3	9 18 04.6	29.0	53.6
24		ε	Arietis	5	+20 42	41.3	7.2	16 19 33.2	59.2	25.3
25		E	Eridani	4	—24 14	55.7	22.5	16 24 49.0	15.7	42.5
26		δ	Arietis	4	+19 07	4.5	30.7	16 31 56.2	21.8	48.0
27		ζ	Eridani	4.5	— 9 25	40.8	5.8	16 37 30.4	55.0	19.5
28		g	Arietis	5.6	+24 09	24.0	50.5	16 44 17.0	43.5	10.0
29		f	Tauri	5	+12 23	36.5	1.5	16 51 26.5	51.5	16.3
30		ε	Eridani	4	—10 00	57.5	22.5	16 54 46.8	11.2	36.0
31		δ	Eridani	3.4	—10 19	7.5	32.0	17 04 56.9	21.3	46.2
32		f	Pleiadum	5	+23 33			17 09 00.0	26.5	53.0
33			Moon II	(16.3)	+25 03	32.5	0.5	17 16 27.6	55.5	23.0
34		γ^1	Eridani	2.3	—13 57	3.0	28.0	17 19 58.0	18.0	43.2
35		A^1	Tauri	5	+21 38	40.0	6.2	17 24 32.5	58.8	25.0
36		X	Eridani	3.4	—34 12	8.0	37.5	17 41 06.8	36.0	5.5
37		υ^1	Tauri	5	+22 27	6.3	32.5	17 45 58.6	24.8	51.5
38	28	β	Tauri	3	+28 28	30.0	57.5	18 37 25.0	52.5	20.2
39		δ	Orionis	2	— 0 25	14.5	39.0	18 45 03.0	27.3	51.8
40		α	Leporis	3.4	—17 56		28.0	18 46 53.3	19.0	44.5
41		l	Aurigæ	6	+30 23	37.5	6.0	18 49 34.0	2.0	30.5
42		α	Columbæ	2	—34 09	4.5	31.1	18 55 03.3	32.5	2.2
43		γ	Leporis	4	—22 30	6.0	32.2	18 56 58.2	24.8	51.2
44		C	Tauri	5	+27 46	31.0	58.5	19 04 25.7	53.3	21.0
45		α	Orionis	1	+ 7 22	50.5	15.0	19 07 39.5	4.0	28.5
46		γ	Columbæ	4	—35 22	1.0	31.0	19 13 00.7	30.5	0.5

Sept. 15.—Examined the adjustments of the transit. Sidereal time at mean noon, Washington, 11*h.* 35*m.* 54*s.*17.
26 —Examined the adjustments; ☽ ☌ Pleiades.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	h. m. s.	h. m. s.	s.	h. m. s.	
10 52 18.70	+ .091	+1 50 59.15	+1 50 59.17	+0.20	19 47 27.50	1
9 52 28.00	+ .081	+1 51 02.07	+1 51 02.11	+1.20	19 38 39.23	2
9 56 46.66	+ .085	02.03	.11		19 42 58.60	3
10 01 14.82	+ .091	+1 51 02.24	+1 51 02.11	+1 20	19 47 27.50	4
10 12 41.80	— .485		+1 51 03.47	+1.20	20 10 44.08	5
10 20 06.30	— .446		.48		20 18 09.83	6
10 38 30.60	— .502		+1 51 03.49	+1.20	20 36 37.09	7
10 34 35.90	— .502		+1 51 04.75	+1.20	20 36 37.04	8
11 06 08.50	— .451		.76		21 08 14.86	9
11 20 59.50	— .356	+1 51 04.79	.79		21 23 08.37	10
11 36 02.60	— .432		+1 51 04.80	+1.20	21 38 13.36	11
11 00 07.00	— .093	+1 51 05.88	+1 51 05.88	+1.10	21 06 08.17	12
11 25 09.02	— .435		.90		21 31 13.93	13
11 32 06.40	— .431		.91		21 38 12.46	14
11 56 58.60	— .407		.93		22 03 08.73	15
12 02 12.60	— .372		.93		22 08 23.63	16
12 15 58.00	— .393		+1 51 05.94	+1.10	22 22 11.26	17
12 51 51.06	— .361		+1 51 06.35	+0.20	23 06 02.94	18
13 36 02.06	— .311		.35		23 50 21.25	19
13 57 59.96	— .363		+1 51 06.36	+0.20	0 12 22.69	20
9 09 18.24	— .163	+1 51 07.20	+1 51 07.12	+0.40	19 38 39.19	21
9 13 37.00	— .171	07.25	.12		19 42 58.64	22
9 18 04.64	— .182	06.92	.12		19 47 27.01	23
16 19 33.24	— .111		.23		2 50 04 81	24
16 24 49.08	— .326		.23		2 55 21.29	25
16 31 56.24	— .120		.24		3 02 29.82	26
16 37 30.30	— .252		.24		3 08 04.67	27
16 44 17.00	— .092		.24		3 14 52.65	28
16 51 26.46	— .152		.24		3 22 03.25	29
16 54 46.80	— .255		.24		3 25 24.01	30
17 04 56.78	— .256		.25		3 35 35.63	31
17 09 00.00	— .096		.25		3 39 39 68	32
17 16 27.82	— .088		.25		3 47 08.74	33
17 19 53.04	— .274	+1 51 07.24	.25		3 50 34.34	34
17 24 32.50	— .106		.25		3 55 14.73	35
17 41 06.76	— .386		.26		4 11 51.42	36
17 45 58.74	— .102		+1 51 07.26	+0.40	4 16 44 49	37
18 37 25.04	— .041	+1 51 09.13	+1 51 08.97	+0.90	5 16 10.69	38
18 45 03.12	— .126	08.95	.98		5 23 49.93	39
18 46 53.43	— .175	09.01	.98		5 25 40.49	40
18 49 34.00	— .034		.98		5 28 21.65	41
18 55 03.32	— .231	09.13	.98		5 33 51.67	42
18 58 58.54	— .190		.98		5 37 47.57	43
19 04 25.90	— .044		.99		5 43 15.96	44
19 07 39.50	— .105	+1 51 08.69	.99		5 46 30.04	45
19 13 00.74	— .236		+1 51 08.99	+0.90	5 51 52.02	46

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 28	Moon II	(21.5)	+28°30′	45.7	14.8	19 20 42.9	11.5	40.0
2	cont'd.	κ Aurigæ	4	+29 33			19 26 17.6		12.8
3		κ Columbæ	4.5	—35 05	57.8	27.5	19 31 57.2	27.0	56.8
4	Oct. 16	α Aquilæ	1.2	+ 8 27	24.2	48.7	7 55 13.2	37.8	2.4
5		β Aquilæ	4.5	+ 6 01	52.3	16.8	7 59 41.2	5.7	30.3
6		c Sagittarii	4.5	—28 09	7.5	35.0	8 05 02.5	30.0	57.5
7		θ Aquilæ	3.4	— 1 18	26.0	50.3	8 15 14.6	39.0	3.4
8		σ Capricorni	5.6	—19 37	28.5	34.5	8 22 20.3	46.2	12.0
9		i Cygni	4.5	+29 50	3.8	32.1	8 35 00.0	28.2	56.5
10		β Delphini	4	+14 03	20.2	45.5	8 42 10.2	35.0	0.2
11		ψ Capricorni	4.5	—25 52	49.8	16.5	8 48 43.2	10.2	37.5
12		Moon I	(9.4)	+21 23	36.6	3 5	8 54 30.3	57.0	23.8
13		q Vulpeculæ	5.6	+27 27	54.5	21.8	8 59 49.0	16.3	44.0
14		η Capricorni	5	—20 29	29.4	55.4	9 07 21.4	47.3	13.3
15		ν Aquarii	5	—12 01	5.5	30.5	9 12 55.2	20.0	45.0
16		s Capricorni	5.6	—15 50	4.5	29.8	9 18 55.0	20.3	45.6
17	17	q Vulpeculæ	5.6	+27 27	59.5	27.0	8 55 54.5	22.0	49.3
18		η Capricorni	5.6	—20 29	34.3	0.5	9 03 26.5	52.5	18.5
19		ν Aquarii	5	—12 01	10.8	35.5	9 09 00.2	25.0	49.8
20		s Capricorni	4	—15 50	9.7	35.0	9 15 00.1	0 0	0.0
21		ζ Capricorni	4	—23 06		10.5	9 25 36.7	3.0	29.7
22		β Aquarii	4	— 6 16	23.3	48.0	9 31 12.3	36.7	1.0
23		γ Capricorni	4	—17 23	25.0	51.0	9 39 16.2	41.5	7.5
24		Moon I	(10.4)	—16 20	38.1	4.5	9 44 30.2	56.0	22.0
25		δ Capricorni	3.4	—16 51	23.0	48.5	9 46 14.0	39.5	5.0
26		ι Aquarii	4.5	—14 39	56.2	21.5	10 05 46.5	11.5	36.8
27		ζ Pegasi	3	+ 9 59	32.7	57.5	10 41 22.2	46.7	11.5
28		α Piscis Aus.	1	—30 28	42.8	10.7	10 56 38.8	7.0	35.2
29		α Pegasi	2	+14 20	47.0	11.7	11 04 36.8	2.0	27.0
30	19	ζ Pegasi	3	+ 9 59	42.5	7.0	10 33 31.6	56.3	21.0
31		λ Aquarii	4	— 8 26	28.0	52.8	10 44 17.2	41.6	6.3
32		Moon I	(12 5)	— 3 40	7.5	32.4	11 21 57.3	22.3	47.2
33		λ Piscium	5	+ 0 54	57.6	22.0	11 33 46.5		
34	20	λ Piscium	5	+ 0 54	2.0	26 5	11 29 50.8	15.0	39.5
35		δ Ap. Sculp.	5	—29 01	36 7	4.7	11 36 32.4	0.1	28.0
36		ψ Pegasi	5.6	+24 15	38.7	5.5	11 45 32.0	58.5	25.4
37		α Andromedæ	1	+28 13	6.0	33.5	11 56 01.0	28.5	56.0
38		Moon I	(13.5)	+ 3 36	35.7	0.6	12 11 25.5	50 4	15.3
39	21	β Ceti	2.3	—18 52	34.7	0.5	12 27 26.0	51.6	17.4
40		δ Piscium	5.6	+ 6 42	26.9	50.5	12 33 14.9	39.3	3.8
41		k Piscium	6	+26 20			12 39 13.2	40.2	7.3
42	22	η Piscium	5	+14 31	55 0	20.2	13 10 45.1	10.2	35.5
43		π Piscium	6	+11 18	36.2	0.5	13 16 25.5	50.5	15.0
44		τ Ceti	3.4	—16 47	35.0	0.5	13 24 25.7	51.0	16.5
45		χ² Ceti	5	—11 29	40.5	5.5	13 29 30.5	55.0	20.0
46		β Arietis	3	+20 01	42.5	8.5	13 33 31.3	0.2	26.2
47		υ² Ceti	4.5	—21 52	20.8	47.0	13 40 13.0	39.0	5.3

October 16.—Transit adjustments examined. Sidereal time at mean noon, Washington, 13*h*. 35*m*. 07*s*.35.
17.—☽ ☌ δ Capricorni.
22.—Examined adjustments at 4 p. m.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*h. m. s.*	*h. m. s.*	*s.*	*h. m. s.*	
19 20 42.98	— .041		+1 51 09.00	+0.90	5 59 35.71	1
19 26 17.60	— .037		.00		6 05 11.25	2
19 31 57.26	— .235		+1 51 09.01	+0.90	6 10 52.04	3
7 55 13.26	— .256	+1 51 21.92	+1 51 22.06	+1.30	19 42 58.07	4
7 59 41.26	— .273	+1 51 21.95	.06		19 47 26.79	5
8 05 02.50	— .521		.07		19 52 48.64	6
8 15 14.66	— .322		.08		20 03 02.67	7
8 22 20.30	— .452		.09		20 10 09.34	8
8 35 00.12	— .090		.10		20 22 51.59	9
8 42 10.22	— .216		.10		20 30 02.73	10
8 48 43.44	— .502		.11		20 36 36.74	11
8 54 30.24	— .466		.11		20 42 24.51	12
8 59 49.12	— .111		.12		20 47 44.61	13
9 07 21.36	— .459		.13		20 55 17.73	14
9 12 55.24	— .396		.13		21 00 52.59	15
9 18 55.04	— .424		+1 51 22.14	+1.30	21 06 53.24	16
8 55 54.46	— .045		+1 51 23.47	+0.85	20 47 44.59	17
9 03 26.46	— .184		.48		20 55 17.68	18
9 09 00.26	— .159		.48		21 00 52.41	19
9 15 00.10	— .170		.48		21 06 53.23	20
9 25 36.73	— .192		.49		21 17 31.56	21
9 31 12.26	— .142	+1 51 23.48	.49		21 23 08.08	22
9 39 16.24	— .174		.50		21 31 13.23	23
9 44 30.16	— .172		.50		21 36 28.12	24
9 46 14.00	— .173		.51		21 38 12.23	25
10 05 46.50	— .164		.51		21 57 47.95	26
10 41 22.12	— .098	23.62	.53		22 33 29.47	27
10 56 38.90	— .217	23.52	.54		22 48 48.62	28
11 04 36.90	— .086	+1 51 23.52	+1 51 23.55	+0.85	22 56 48.16	29
10 33 31.68	— .125	+1 51 24.98	+1 51 25.05	+0.55	22 33 29.29	30
10 44 17.18	— .186		.06		22 44 16.48	31
11 21 57.34	— .169		.06		23 22 02.84	32
11 33 46.50	— .154		+1 51 25.07	+0.55	23 33 53.95	33
11 29 50.76	— .154		+1 51 25.56	+0.50	23 33 53.63	34
11 36 32.38	— .265		.56		23 40 36.24	35
11 45 32.02	— .069		.56		23 49 37.54	36
11 56 01.00	— .053	+1 51 25.56	.56		0 00 08.27	37
12 11 25.50	— .145		+1 51 25.57	+0.50	0 15 35.20	38
12 27 26.04	— .402	+1 51 25.80	+1 51 25.80	+0.47	0 35 34.43	39
12 32 14.88	— .242		.80		0 40 24.22	40
12 39 13.20	— .109		+1 51 25.80	+0.47	0 47 23.82	41
13 10 45.20	— .273		+1 51 26.39	+0.40	1 22 56.79	42
13 16 25.54	— .303		.39		1 28 38.03	43
13 24 25.74	— .552		.39		1 36 39.30	44
13 29 30 30	— .503		.39		1 41 44.74	45
13 33 34.34	— .222		.39		1 45 49.73	46
13 40 13.02	— .601		+1 51 26.40	+0.40	1 52 28.78	47

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 22	α Arietis	3	+22°42′	0.7	27.5	13 45 53.6	19.7	46.5
2	cont'd.	ι Trianguli	5.6	+29 32	53.0	21.0	13 50 49.0	17.0	45.0
3		θ¹ Arietis	6	+19 09	4.5	30.5	13 56 55.8	21.5	47.5
4		Moon II	(15.6)	+17 44	56.2	22.6	14 00 48.7	14.8	41.1
5		c Trianguli	6	+28 56	32.8	0.8	14 06 28.0	56.0	24.0
6		ν Ceti	5	+ 4 53		43.0	14 15 07.5	32.0	56.5
7		δ Ceti	4	— 0 21	6.5	31.3	14 18 55.0	19.8	44.0
8		γ Ceti	4	+ 2 34			14 22 38.5	3.0	27.3
9		π Arietis	5	+16 47	8.2	33.5	14 27 58.7	24.0	49.3
10		τ² Eridani	5	—21 40	31.5	57.5	14 31 23.7	49.8	16.0
11		ε Arietis	5	+20 42	47.0	13.0	14 37 39.3	5.6	31.8
12	23	γ Ceti	4	+ 2 34	55.0	19.5	14 18 43.6	7.7	32.2
13		ε Arietis	5	+20 42	52.8	18.8	14 33 44.8	10.8	36.8
14		α Ceti	2.3	+ 3 27	46.2	10.5	14 37 34.8	59.0	23.3
15		δ Arietis	4	+19 06			14 46 07.5	33.0	59.0
16		Moon II	(16.6)	+23 08	27.6	54.8	15 00 21.8	48.8	16.1
17		η Tauri	3	+23 36	38.2	4.9	15 21 31.3	57.7	24.3
18		γ¹ Eridani	2.3	—13 59	14.3	39.5	15 34 04.6	29.7	54.3
19		A¹ Tauri	5	+21 38	51.8	18.0	15 38 44.0	10.2	36.5
20	25	α Tauri	1	+16 11	28.3	53.6	16 02 18.8	44.1	9.4
21		τ Tauri	5	+22 39	19.5	46.0	16 08 12.0	38.2	4.5
22		μ Eridani	5	— 3 33	14.2	38.6	16 13 02.7	26.8	51.3
23		r Orionis	4	+ 5 19	24.0	48.5	16 18 12.7	37.0	1.7
24		ι Tauri	5	+21 21	9.6	36.0	16 29 01.9	28.0	54.2
25		ε Leporis	3.4	—22 35	18.2	44.5	16 34 10.7	37.0	3.4
26		β Orionis	1	— 8 23	29.6	54.1	16 42 18.6	43.2	7.7
27		β Tauri	2	+28 28	41.6	9.5	16 51 36.9	4.5	32.3
28		β Leporis	4	—20 53	56.7	23.0	16 56 48.8	14.8	41.0
29		α Leporis	3.4	—17 57	14.0	39.7	17 01 05.1	30.5	56.2
30		l Aurigæ	6	+30 23	49.2	17.3	17 03 45.5	13.5	42.2
31		Moon II	(18.7)	+28 23	38.8	7.5	17 08 35.8	4.3	32.8
32		C Tauri	5	+27 34	43.0	10.4	17 18 37.7	5.0	32.3
33		139 Tauri	6	+25 56	30.7	58.0	17 23 24.5	51.5	18.8
34		ν Orionis	5	+14 47	34.5	20.0	17 33 45.0	10.0	35.5
35		κ Aurigæ	4	+29 33	32.8	0.8	17 40 28.7	56.7	24.8
36	26	C Tauri	5	+27 34	48.0	15.4	17 14 42.9	10.2	37.8
37		139 Tauri	6	+25 56	35.5	2.9	17 19 29.6	56.5	23.8
38		γ Columbæ	4	—35 18	18.0	47.8	17 23 17.5	47.3	17.0
39		ν Orionis	5.6	+14 47	59.9	25.0	17 29 50.0	15.1	40.2
40		κ Aurigæ	4.5	+29 33	38.0	6.0	17 36 33.7	1.5	29.6
41		μ Geminorum	3	+22 35	45.5	12.0	17 44 38.2	4.5	31.0
42		λ Canis Maj.	4	—33 21	39.0	8.3	17 47 37.2	6.1	35.5
43		γ Geminorum	3	+16 32	56.2	21.5	17 59 46.7	12.0	37.3
*44		ε Geminorum	3.4	+25 17	29.4	56.1	18 05 22.8	49.7	16.6
45		α Canis Maj.	1	—16 30	32.5	58.0	18 09 23.3	48.6	14.0
46		Moon II	(19.8)	+27 49	10.5	38.8	18 12 07.0	35.3	3.6
47	28	η Tauri	3	+23 36	3.5	30.2	15 01 56.6	23.0	49.6
*48		α Tauri	1	+16 11	43.5	8.8	15 50 34.0	59 0	24.3
49		6 Cancri	6	+28 14	0.5	28.0	19 16 55.5	23.0	50.8

October 22.—Sidereal time at mean noon, Washington, 14*h*. 1*m*. 46*s*.66.
25.—Examined instrumental adjustments.
28.—☽ ☌ γ Cancri.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	h. m. s.	h. m. s.	s.	h. m. s.	
13 45 53.60	— .193	+1 51 26.74	+1 51 26.40	+0.40	1 58 11.04	1
13 50 49.00	— .119		.40		2 03 07.31	2
13 56 55.96	— .229		.40		2 09 15.20	3
14 00 48.66	— .242		.40		2 13 08.50	4
14 06 28.32	— .126		.40		2 18 49.20	5
14 15 07.50	— .360		.40		2 27 29.57	6
14 18 55.32	— .404		.41		2 31 17.96	7
14 22 38.50	— .379	+1 51 26.13	.41		2 35 01.77	8
14 27 58.74	— .251		.41		2 40 23.04	9
14 31 23.70	— .600		.41		2 43 48.20	10
14 37 39.34	— .214		+1 51 26.41	+0.40	2 50 05.22	11
14 18 43.60	— .085	+1 51 27.44	+1 51 27.73	+0.52	2 35 01.75	12
14 33 44.80	— .048		.73		2 50 05.45	13
14 37 34.76	— .083	27.54	.73		2 53 56.01	14
14 46 07.50	— .051		.74		3 02 30.18	15
15 00 21.82	— .042		.74		3 16 46.85	16
15 21 31.28	— .041	27.77	.75		3 37 59.78	17
15 34 04.48	— .117	+1 51 28.76	.75		3 50 34.96	18
15 38 44.10	— .045		+1 51 27.75	+0.52	3 55 15.42	19
16 02 18.84		+1 51 29.51	+1 51 29.58	+0.80	4 26 45.37	20
16 08 12.04			.58		4 32 39.54	21
16 13 02.72			.59		4 37 30.99	22
16 18 12.78			.59		4 42 41.90	23
16 29 01.94			.59		4 53 32.85	24
16 34 10.76			.60		4 58 42.49	25
16 42 18.64		29.58	.60		5 06 51.71	26
16 51 36.96		29.66	.61		5 16 11.56	27
16 56 48.86			.61		5 21 24.30	28
17 01 05.10		+1 51 29.65	.61		5 25 41.25	29
17 03 45.54			.61		5 28 22.12	30
17 08 35.84			.62		5 33 13.21	31
17 18 37.68			.62		5 43 16.71	32
17 23 24.70			.63		5 48 04.49	33
17 33 45.00			.64		5 58 26.48	34
17 40 28.76			+1 51 29.64	+0.80	6 05 11.36	35
17 14 42.86	— .107		+1 51 30.35	+0.85	5 43 16.96	36
17 19 29.66	— .128		.36		5 48 04.50	37
17 23 17.52	— .566		.36		5 51 52.54	38
17 29 50.04	— .203		.36		5 58 26.51	39
17 36 33.76	— .089		.37		6 05 11.45	40
17 44 38.24	— .146	+1 51 30.38	.37		6 13 17.18	41
17 47 37.22	— .547		.37		6 16 16.25	42
17 59 46.74	— .191		.38		6 28 28.12	43
18 05 22.92	— .125		.38		6 34 05.29	*44
18 09 23.28	— .412	+1 51 30.38	.39		6 38 06.02	45
18 12 07.04	— .104		+1 51 30.39	+0.85	6 40 50.53	46
15 01 56.58		+1 51 32.57	+1 51 32.29	+1.00	3 38 00.14	47
15 50 33.92		+1 51 32.24	.31		4 26 45.45	*48
19 16 55.56			+1 51 32.47	+1.00	7 53 40.83	49

No. 44. Recorded at transit over middle wire 18h. 4m.
48. Observation doubtful.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 28	ζ Argus	3	—39°33′	8.3	40.0	19 21 11.5	43.3	15.0
2	cont'd.	15 Argus	3.4	—23 50	4.5	30.8	19 23 57.4	24.0	50.5
3		20 Argus	6.7	—15 18	21.0	46.0	19 29 11.0	36.0	1.0
4		λ Cancri	6	+24 31	19.0	46.0	19 34 12.6	39.2	6.2
5		θ Cancri	5.6	+18 38	46.4	12.2	19 45 37.7	3.2	29.0
6		γ Cancri	5	+22 02	16.2	42.8	19 57 08.4	35.2	1.0
7		ε Hydræ	4	+ 7 00	35.8	0.6	20 01 25.0	49.4	14.0
8		Moon II	(21.9)	+21 27	42.0	8.5	20 05 35.3	2.0	28.6
9		ζ Hydræ	4	+ 6 33	12.5	37.0	20 10 01.5	26.0	50.5
10	Nov. 16	α Piscis Aust.	1	—30 28	12.5	41.1	8 59 09.5	37.5	5.5
11		α Pegasi	2	+14 21	16.5	42.0	9 07 07.3	32.3	57.3
12		c³ Aquarii	5	—23 19	47.2	14.5	9 11 41.0	7.0	33.5
13		φ Aquarii	5	— 6 55		55.5	9 16 20.3	44.5	9.0
14		τ Pegasi	6	+22 52	7.2	33.8	9 23 00.5	26.5	53.0
15		κ¹ Piscium	.6	+ 0 23	11.0	35.7	9 29 00.5	24.5	48.5
16		b⁴ Aquarii	6	—21 48	16.3	43.0	9 35 09.5	35.5	1.5
17		ι Piscium	5	+ 4 46	8.3	33.0	9 41 57.6	22.0	46.3
18		ι Pegasi	5.6	+28 28	15.0	42.5	9 46 10.7	37.5	5.5
19		δ Ap. Sculp.	5	—29 01	52.3	20.5	9 50 48.5	16.0	44.0
20		φ Pegasi	6	+18 13	41.7	7.5	9 54 33.7	59.0	24.4
21		Moon I	(10.7)	+ 0 09	40.6	5.7	9 58 30.9	55.3	20.4
22		ω Piscium	4.5	+ 5 58	27.8	52.5	10 01 17.3	41.5	5.9
23		g Ceti	5	—18 13	51.4	17.2	10 05 43.0	8.5	34.0
24		α Andromedæ	1	+28 45	22.0	49.6	10 10 17.7	44.7	12.5
25		γ Pegasi	2.3	+14 18	18.5	43.8	10 15 09.3	34.0	59.2
26		d Piscium	5.6	+ 7 18	40.5	5.5	10 22 30.0	54.3	18.7
27	17	ω Piscium	4.5	+ 5 58	33.6	58.1	9 57 22.0	46.0	10.5
28		δ Andromedæ	3	+29 59	1.5	29.7	10 36 57.1	24.5	52.6
29		β Ceti	2.3	—18 52	51.9	17.5	10 41 42.5	17.5	33.3
30		Moon I	(11.8)	+ 7 16	39.8	4.6	10 47 29.1	53.6	18.5
31		k Piscium	6.7	+26 21	36.7	3.5	10 53 30.1	56.5	23.7
32		α Ap. Sculp.	5	—30 12	5.0	33.2	10 57 00.5	28.0	56.0
33		ε Piscium	4.5	+ 7 01	56.5	21.0	11 00 44.8	08.5	33.0
34	18	δ Piscium	5	+ 6 43	47.6	12.0	10 42 36.0	0.0	21.3
35		k Piscium	6.7	+26 21	41.0	8.0	10 49 34.5	1.0	28.0
36		α Ap. Sculp.	5	—30 12	9.5	37.8	10 53 05.1	32.5	0.8
37		ε Piscium	4.5	+ 7 01	1.0	25.5	10 56 49.5	13.5	38.0
38		η Ceti	3.4	—11 02	53.5	18.3	11 02 42.5	6.6	31.4
39		φ Piscium	6	+23 44	21.2	47.8	11 07 13.7	39.6	6.0
40		l Piscium	6	+27 54	31.0	58.6	11 14 25.5	52.5	20.0
41		θ¹ Ceti	3	— 9 01	20.6	45.1	11 18 09.0	33.0	57.5
42		η Piscium	4	+14 31	12.6	37.7	11 25 02.2	26.5	51.8
43		49 Ceti	5.6	—16 30	4.5	30.0	11 28 54.6	19.2	44.5
44		Moon I	(12.8)	+14 00	56.6	22.2	11 39 47.3	12.3	38.0
45		χ² Ceti	5	—11 28	58.2	23.0	11 43 47.0	11.2	36.0
46		β Arietis	3	+20 01	0.5	26.3	11 47 51.5	16.8	42.5
47		υ² Ceti	4.5	—21 51	38.0	4.1	11 54 29.8	55.3	21.2
48		α Arietis	3	+22 42	18.8	45.2	12 00 10.9	36.5	3.0
49		ι Trianguli	6	+29 33	11.2	39.2	12 05 06.5	33.6	1.5
50		θ¹ Arietis	6	+19 09	22.5	48.3	12 11 13.5	38.5	4.0

November 16.—Adjusted the transit at 4 P. M. Sidereal time, at mean noon, Washington, 15*h*. 40*m*. 20*s*.57.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*h. m. s.*	*h. m. s.*	*s.*	*h. m. s.*	
19 21 11.62			+1 51 32.47	+1.00	7 57 57.59	1
19 23 57.44		+1 51 32.57	.48		8 00 43.86	2
19 29 11.00			.48		8 05 58.27	3
19 34 12.60			.48		8 11 00.70	4
19 45 37.70			.49		8 22 27.66	5
19 57 08.72			.50		8 34 00.57	6
20 01 24.96		+1 51 32.20	.50		8 38 17.51	7
20 05 35.28			.50		8 42 28.51	8
20 10 01.50			+1 51 32.51	+1.00	8 46 55.45	9
8 59 09.22	+ .543	+1 51 52.27	+1 51 51.99	+1.10	22 48 48.54	10
9 07 07.30	+ .215	51.72	52.00		22 56 47.61	11
9 11 41.00	+ .481		.00		23 01 22.30	12
9 16 20.30	+ .353		.00		23 06 02.24	13
9 23 00.50	+ .150		.01		23 12 43.82	14
9 29 00.50	+ .311		.01		23 18 44.46	15
9 35 09 50	+ .469		.02		23 24 54.62	16
9 41 57.60	+ .284	52.01	.02		23 31 43.66	17
9 46 10.70	+ .102		.03		23 35 57.25	18
9 50 48.26	+ .580		.03		23 40 36.01	19
9 54 33.70	+ .186		.03		23 44 21.72	20
9 58 30.90	+ .312		.08		23 48 19.67	21
10 01 17.30	+ .273		.04		23 51 06.50	22
10 05 43.00	+ .442		.04		23 55 33.10	23
10 10 17.70	+ .100	52.14	.04		0 00 08.21	24
10 15 09.30	+ .215	+1 51 51.95	.05		0 05 00.72	25
10 22 30.00	+ .264		+1 51 52.05	+1.10	0 12 22.67	26
9 57 22.04	+ .344		+1 51 53.01	+0.98	23 51 06.25	27
10 36 57.08	+ .112		.04		0 30 47.53	28
10 41 42.54	+ .544	+1 51 53.04	.04		0 35 34.20	29
10 47 29.12	+ .334		.04		0 41 21.52	30
10 53 30.10	+ .153		.05		0 47 23.30	31
10 57 00.54	+ .681		.05		0 50 54.84	32
11 00 44.76	+ .335		+1 51 53.05	+0.98	0 54 39.33	33
10 42 35.98	+ .802		+1 51 54.05	+0.15	0 40 23.60	34
10 49 34.50	+ .363		.05		0 47 22.81	35
10 53 05.14	+1.621		.05		0 50 55.29	36
10 56 49.50	+ .798		.05		0 54 39.44	37
11 02 42.46	+1.168		.05		1 00 33.73	38
11 07 13.66	+ .432		.05		1 05 04.94	39
11 14 25.52	+ .324		.06		1 12 17.88	40
11 18 09.04	+1.126	+1 51 54 05	.06		1 16 02.81	41
11 25 02.16	+ .640		.06		1 22 56.56	42
11 28 54.56	+1.287		.06		1 26 50.25	43
11 39 47.28	+ .651		.06		1 37 44.12	44
11 43 47.08	+1.179		.06		1 41 45.10	45
11 47 51.52	+ .516		.06		1 45 49.56	46
11 54 29.68	+1.410		.06		1 52 29.69	47
12 00 10.88	+ .453	+1 51 54 07	.06		1 58 10.87	48
12 05 06.40	+ .280		.07		2 03 07.01	49
12 11 13.36	+ .535		+1 51 54.07	+0.15	2 09 15.25	50

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 19	β Arietis	3	+20°01′	5.5	31.2	11 43 56.5	21.8	47.6
2		υ² Ceti	4.5	—21 51	43.1	9.0	11 50 34.7	0.5	26 5
3		α Arietis	3	+22 42	23.6	50.1	11 56 15.8	41.5	7.8
4		ι Trianguli	6	+29 33	16.1	44 0	12 01 11.2	38.5	6.6
5		β¹ Arietis	6.7	+19 09	27.3	53.2	12 07 18.0	43.2	9.0
6		χ Fornacis	6	—24 32	23.5	50.5	12 13 16.3	42.3	9.2
7		ν Ceti	5	+ 4 53	41.7	6.0	12 25 30.0	54.0	18.0
8		δ Ceti	4	— 0 21	29.7	54.0	12 29 17.5	41.0	5.5
9		γ Ceti	3	+ 2 34	12.6	37.0	12 33 00.6	24.3	48.6
10		Moon I	(13.8)	+20 12	49.5	16.2	12 36 42.0	7.9	34.7
11		ρ² Arietis	6	+17 41	57.2	22.7	12 44 47.5	12.5	38.0
12		ε Arietis	5	+20 42	10.5	36.6	12 48 02.0	27.2	53.3
13		α Ceti	2.3	+ 3 28	4.0	28.2	12 51 52.0	15.7	40.0
14		δ Arietis	4	+19 07	34.0	59.8	13 00 24.9	49.8	15.7
15		α Canis Min.	1.2	+ 5 38	17.9	42.3	17 28 06.0	30.0	54.3
16		β Geminorum	2	+28 25	47.0	14.6	17 32 41.4	8.3	36.0
17		15 Argus	3.4	—23 51	57.0	23.4	17 57 49.5	15.5	42.0
18	20	ε Arietis	5	+20 42	15.0	41.0	12 44 06.2	31.5	57.5
19		α Ceti	2 3	+ 3 28	8.1	32.5	12 47 56.2	20.0	44.4
20		δ Arietis	4	+19 07	37 5	3.6	12 56 28.8	54.0	20.0
21		12 Eridani	4	—29 37	21.2	49.0	12 59 16.3	43.5	11.2
22		k² Ceti	6	— 1 31	22.0	46.2	13 04 10.0	33.7	57.8
23		g Arietis	6	+24 09	57.5	24.2	13 08 50.3	16.0	42.8
24		f Tauri	5.6	+12 23	16.2	35.0	13 15 59.5	23.5	48.4
25		t² Eridani	4.5	—22 10	47.4	13.6	13 20 39.0	4.5	30.8
26		y Eridani	5	—40 48	13 5	45.8	13 25 17.0	48.0	20.0
27		b Pleiadum	4.5	+23 36	25 0	51.6	13 29 17.4	43.2	10 0
28		η Tauri	3	+23 36	0.5	27.0	13 31 53.1	18.9	45.4
29		f Pleiadum	5	+23 38	41.0	7.5	13 33 33.2	59.0	25.5
30		Moon I	(14.9)	+24 54	45.8	13 2	13 38 40.1	46.8	34.5
31		Moon II	(14.9)	+24 54	20.5	47.8	13 41 14.7	41.5	9.2
32		γ¹ Eridani	2.3	—13 58	36.3	1.3	13 44 25.8	50.3	15.2
*33		A¹ Tauri	5	+22 38	14.3	40.4	13 49 06.0	31.4	57.5
34		ω¹ Tauri	6.7	+19 11	51.0	16.5	13 53 41.6	·6.8	32.3
35		μ Tauri	5.6	+ 8 29	51.6	16.0	14 00 40.1	4.2	28.6
36		X Eridani	3.4	—34 11	41.0	10.5	14 05 39.1	7.5	37.0
37		υ¹ Tauri	5	+22 27	40.3	6.6	14 10 32.3	57.6	24.1
38	21	γ¹ Eridani	2.3	—13 58	40.3	5.2	13 40 30.0	54.0	19.2
*39		A¹ Tauri	5	+22 38	18 0	44.2	13 45 09.6	35.2	1.3
40		ω¹ Tauri	6.7	+19 11	54.6	20 4	13 49 45.3	10.5	36.2
41		μ Tauri	5.6	+ 8 29	55.5	20.2	13 56 44.0	8.0	32.5
42		X Eridani	3.4	—34 11	45 0	14.6	14 01 43.2	11.5	41.2
43		υ¹ Tauri	5	+22 27	44.0	10.2	14 06 36.0	1.5	27.6
44		α Tauri	1	+16 11	44.5	10.0	14 16 34.4	59.0	24.5
45		μ Eridani	5	— 3 33	30.2	54.5	14 27 18.0	41.8	6.3
46		r Orionis	4.5	+ 5 19	40.3	4.6	14 32 28.5	52.2	16.5
47		o² Orionis	5	+13 15	20.0	45.0	14 37 09.0	33.2	58.5
48		63 Eridani	6	—10 30	13.0	37.5	14 42 01.8	25.8	50.5
49		Moon II	(15.9)	+27 42	13.7	42.1	14 47 09.6	37.2	5.5
*50		λ Eridani	4.5	— 8 58	25.0	49.6	14 51 13.5	37.2	2.0
51		β Orionis	1	— 8 24	45.7	10.0	14 56 34.0	58.1	22.6

November 19.—☽ ☌ ε Arietis. Sidereal time at mean noon, 15*h*. 52*m*. 10*s*.23.
20.—☽ ☌ Pleiades.
21.—Examined the adjustments of the transit.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*h. m. s.*	*h. m. s.*	*s.*	*h. m. s.*	
11 43 56.52	+ .172		+1 51 54.37	+0.25	1 45 49.81	1
11 50 34.76	+ .469		.37		1 52 29.44	2
11 56 15.76	+ .151	+1 51 54.56	.37		1 58 11.05	3
12 01 11.28	+ .093		.37		2 03 07.32	4
12 07 18.14	+ .170		.37		2 09 15.28	5
12 13 16.36	+ .496		.38		2 15 14.78	6
12 25 29.94	+ .281		.38		2 27 30.15	7
12 29 17.54	+ .316		.38		2 31 18.42	8
12 33 00.62	+ .296	54.20	.38		2 35 02.11	9
12 36 42.06	+ .170		.38		2 38 44.00	10
12 44 47.58	+ .197		.38		2 46 50.88	11
12 48 01.92	+ .167		.38		2 50 05.72	12
12 51 51.98	+ .290	54.44	.38		2 53 56.54	13
13 00 24.84	+ .179		.38		3 02 30.69	14
17 28 06.10	+ .277	54.16	.42		7 30 55.98	15
17 32 41.46	+ .103	54.39	.42		7 35 31.92	16
17 57 49.48	+ .485	+1 51 54.40	+1 51 54.43	+0.25	8 00 44.44	17
12 44 06.24	+ .167		+1 51 54.63	+0.12	2 50 05.70	18
12 47 56.24	+ .290	+1 51 54.59	.64		2 53 56.44	19
12 56 28.78	+ .179		.64		3 02 30.28	20
12 59 16.24	+ .535		.64		3 05 18.54	21
13 04 09.94	+ .374		.64		3 10 12.89	22
13 08 50.16	+ .139		.64		3 14 53 64	23
13 15 59.52	+ .278		.64		3 22 04.32	24
13 20 39.06	+ .472		.64		3 26 44.81	25
13 25 16.86	+ .649		.64		3 31 23.55	26
13 29 17.44	+ .144		.64		3 35 24.29	27
13 31 52.98	+ .144	54.66	.64		3 38 00.25	28
13 33 33.24	+ .144		.64		3 39 40.79	29
13 38 40.08	+ .133		.64		3 44 48.45	30
13 41 14.74	+ .133		.64		3 47 23.54	31
13 44 25.78	+ .411	+1 51 54.67	.64		3 50 35.39	32
13 49 05.92	+ .156		.64		3 55 16.04	*33
13 53 41.64	+ .178		.65		3 59 52.52	34
14 00 40.10	+ .256		.65		4 06 52.21	35
14 05 39.02	+ .578		.65		4 11 52.28	36
14 10 32.18	+ .153		+1 51 54.65	+0.12	4 16 45.80	37
13 40 29.74	+ .606	+1 51 54.73	+1 51 54.58	—0.30	3 50 35.52	38
13 45 09.66	+ .226		.58		3 55 15.83	*39
13 49 45.40	+ .267		.58		3 59 52.36	40
13 56 44.04	+ .384		.58		4 06 52.26	41
14 01 43.10	+ .867		.58		4 11 52.63	42
14 06 35.86	+ .229		.58		4 16 45.54	43
14 16 34.48	+ .301	54.49	.57		4 26 45.90	44
14 27 18.16	+ .457		.57		4 37 31.48	45
14 32 28.42	+ .476		.57		4 42 42.61	46
14 37 09.14	+ .335		.57		4 47 23.96	47
14 42 01.72	+ .579		.57		4 52 17.58	48
14 47 09.62	+ .164		.57		4 57 25.90	49
14 51 13.46	+ .563		.57		5 01 30.82	*50
14 56 34.08	+ .566	+1 51 54.59	+1 51 54.57	—0.30	5 06 52.34	51

No 33. A^2 followed this star 37*s*.78.
39. A^2 followed this star 37*s*.84.
50. Two stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 21	o Columbæ	5	—35°03	27.2	56.6	15 01 25.5	54.1	24.3
2	cont'd.	β Tauri	2	+28 28	58.3	25.9	15 05 53.0	19.8	47.3
3		δ Orionis	2	— 0 26	42.5	6.6	15 13 30.8	54.0	18.0
4		l Aurigæ	6	+30 23	6.0	34.1	15 18 01.5	29.0	57.3
5	22	β Orionis	1	— 8 24	49.0	13.5	14 52 37.5	1.5	26.0
6		o Columbæ	5	—35 03	30.1	59.8	14 57 28.6	57.5	27.2
7		β Tauri	2	+28 28	1.9	29.4	15 01 56.4	23.3	50 9
8		δ Orionis	2	— 0 26	45.5	10.1	15 09 33.8	57.5	21.3
9		l Aurigæ	6	+30 23	9.6	37.6	15 14 05.4	33.0	0.9
10		α Columbæ	2	—34 10	35.4	5.0	15 19 33.5	2.0	31.3
11		B Tauri	5.6	+24 30	0.7	27.2	15 24 53.5	19.5	46.0
12		C Tauri	5	+27 34	3.2	30.5	15 28 57.2	24.0	56.2
13		α Orionis	1	+ 7 22	22.2	46.6	15 32 10.5	34.5	59.0
14		γ Columbæ	4	—35 18	32.0	1.6	15 37 30.8	0.0	29.5
15		C Orionis	6	+ 4 10	21.2	45.5	15 42 09.2	33.0	57.5
16		τ Leporis	6	—19 09	30.6	56.5	15 46 21.6	46.5	12.2
17		κ Aurigæ	5	+29 33	53.2	21.0	15 50 48.3	15.5	43.5
18		Moon II	(17.0)	+28 11	57.2	25.6	15 53 53.4	21.0	49.5
19		μ Geminorum	3	+22 35	0.7	27.0	15 58 52.6	18.3	44.5
20		λ Canis Maj.	4	—33 21			16 01 51.0	19.3	48.2
21		D^1 Canis Maj.		—32 29	51.3	19.8	16 07 48.0	16.2	45.0
22		γ Geminorum	3	+16 32	11.1	36.3	16 14 01.0	25.7	51.0
23		ε Geminorum	3	+25 17	44.4	11.5	16 19 37.6	3.6	30.5
24		α Canis Maj	1	—16 30	47.0	12.5	16 23 37.2	2.0	27.0
25	Dec. 5	ζ Pegasi	4	+10 00	51.5	16.2	22 33 40.2	4.2	29.2
26		μ Pegasi	4	+23 39	36.0	2.8	22 42 28.7	54.7	21.2
27		α Piscis Aust.	1	—30 28	3.1	31.2	22 48 58.5	26.5	54.7
28		81 Aquarii	6.7	— 7 55	27.0	51.4	22 53 15.4	39.5	4.2
29		α Pegasi	2	+14 21	9.5	34.7	22 56 59.3	23.7	49.0
30	6	α Andromedæ	1	+28 12	24.6	52.3	0 00 19.5	46.2	13.8
31		γ Pegasi	2.3	+14 17	22.1	47.3	0 05 11.8	36.2	1.5
32		δ Andromedæ	3	+29 58	3.3	31.5	0 30 59.0	26.3	54.5
33		β Ceti	2	—18 52	54.3	20.2	0 35 45.2	10.2	36.0
34	9	β Piscis Aust.	4	—33 13	37.1	6.5	22 22 34.8	3.1	32.1
35		η Aquarii	4	— 0 56	30.8	55.1	22 27 19.0	42.8	7.0
36		ζ Pegasi	3.4	+10 00	51.1	16.0	22 33 40.0	4.1	29.0
37		λ Pegasi	4.5	+22 47	8.5	35.0	22 39 00.8	26.3	53.0
38		μ Pegasi	4	+23 45	35.6	2.1	22 42 28.2	54.3	20.6
39		α Piscis Aust.	1	—30 28	3.0	31.5	22 48 59.0	26.3	54.8
40		81 Aquarii	6.7	— 7 55	27.0	51.4	22 53 15.5	39.5	4.0
41		α Pegasi	2	+14 21	9.0	34.3	22 56 58.9	23.5	48.3
42		c^2 Aquarii	5	—22 02	13.8	40.0	23 01 05.5	31.1	57.5
43		φ Aquarii	5	— 6 55	24.7	49.4	23 06 13.2	37.0	1.5
44		τ Pegasi	6	+22 52	2.5	28.9	23 12 54.7	20.5	47.0
45		κ^1 Piscium	6	+ 0 23	7.0	31.3	23 18 55.0	19.0	43.0
46	10	η Piscium	4	+14 31	18.0	43.2	1 23 08.0	32.5	57.7
47		49 Ceti	6	—16 28	11.0	36 3	1 27 01.1	25.8	51.3
48		105 Piscium	6	+15 36	25.7	51.0	1 31 15.8	40.5	5.5

November 22.—Sidereal time at mean noon, 16*h*. 3*m*. 59*s*.91.
December 5.—Adjusted the transit instrument. The observations are henceforward made by a sidereal chronometer.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires	Instru't correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	h. m. s.	h. m. s.	s.	h. m. s.	
15 01 25.54	+ .880		+1 51 54.56	—0.30	5 11 44.90	1
15 05 52.86	+ .153	+1 51 54.57	.56		5 16 12.24	2
15 13 30.28	+ .475	+1 51 54.47	.56		5 23 51.24	3
15 18 01.58	+ .126		+1 51 54.56	—0.30	5 28 22.94	4
14 52 37.50	+ .619	+1 51 53.96	+1 51 53.96	—0.60	5 06 52.33	5
14 57 28.64	+ .978		.96		5 11 44.62	6
15 01 56.38	+ .171	53.97	.96		5 16 12.26	7
15 09 33.64	+ .528	53.77	.96		5 23 51.16	8
15 14 05.30	+ .143		.96		5 28 23.26	9
15 19 33.44	+ .963	53.99	.95		5 33 53.05	10
15 24 53.38	+ .228		.95		5 39 13.12	11
15 28 57.22	+ .185		.95		5 43 17.59	12
15 32 10.56	+ .439	53.83	.95		5 46 31.72	13
15 37 30.78	+ .902		.95		5 51 53.27	14
15 42 09.28	+ .475		.94		5 56 32.12	15
15 46 21.48	+ .749		.94		6 00 45.28	16
15 50 48.30	+ .155		.94		6 05 12.25	17
15 53 53.34	+ .176		.94		6 08 17.81	18
15 58 52.62	+ .253	53.95	.94		6 13 17.98	19
16 01 51.00	+ .942		.94		6 16 17.54	20
16 07 48.06	+ .936		.94		6 22 15.58	21
16 14 01.02	+ .331		.93		6 28 28.95	22
16 19 37.52	+ .217		.93		6 34 06.27	23
16 23 37.14	+ .715	+1 51 54.21	+1 51 53.93	—0.60	6 38 07.04	24
22 33 40.26	+ .551	+0 00 11.98	+0 00 12.02	—0.50	22 33 28.79	25
22 42 28.68	+ .323		.02		22 42 16.98	26
22 48 58.80	+1.222	12.03	.02		22 48 48.00	27
22 53 15.50	+ .827		.02		22 53 04.31	28
22 56 59.24	+ .483	+0 00 12.04	+0 00 12.02	—0.50	22 56 47.70	29
0 00 19.28	+ .120	+0 00 11.51	+0 00 11.48	—0.32	0 00 07.92	30
0 05 11.78	+ .246	11.40	.48		0 05 00.55	31
0 30 58.96	+ .102		.48		0 30 47.58	32
0 35 45.18	+ .510	+0 00 11.52	+0 00 11.48	—0.32	0 35 34.21	33
22 22 34.72	+ .307		+0 00 11.31	+0.42	22 22 23.72	34
22 27 18.94	+ .173		.31		22 27 07.80	35
22 33 40.04	+ .132	+0 00 11.38	.31		22 33 28.86	36
22 39 00.72	+ .081		.31		22 38 49.49	37
22 42 28.16	+ .077		.32		22 42 16.92	38
22 48 58.92	+ .293	11.28	.32		22 48 47.89	39
22 53 15.48	+ .199		.32		22 53 04.36	40
22 56 58.80	+ .116	+0 00 11.29	.32		22 56 47.60	41
23 01 05.58	+ .254		.32		23 00 54.51	42
23 06 13.16	+ .195		.33		23 06 02.02	43
23 12 54.72	+ .258		.33		23 12 43.65	44
23 18 55.06	+ .168		+0 00 11.33	+0.42	23 18 43.90	45
1 23 07.88	+ .065		+0 00 11.77	+0.42	1 22 56.19	46
1 27 01.10	+ .172		.77		1 26 50.50	47
1 31 15.70	+ .082		+0 00 11.77	+0.42	1 31 04.01	48

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 10	ο Piscium	5	+ 8°21′	20.7	45.1	1 37 09.4	33.4	57.8
2	cont'd.	α Trianguli	3.4	+28 48	16.0	43.9	1 44 11.0	38.0	6.0
3		υ^2 Ceti	4.5	—21 50	48.6	14.7	1 52 40.5	6.0	32.2
4		α Arietis	3	+22 42	30.5	56.8	1 58 22.6	48.2	11.6
5	12	ζ Pegasi	3.4	+10 00			22 33 40.9		29.9
6		Moon I	(6.8)	— 8 44	6.1	31.0	22 38 55.7	20.2	45.5
7		λ Aquarii	4	— 8 26	39.2	4.0	22 44 23.0	52.0	16.6
*8		α Piscis Aus.	1	—30 28	4.3	32.7	22 49 00.3	28.0	56.0
9		γ Ceti	3	+ 2 34	26.0	50.5	2 35 14.2	38 0	2.5
10	.	α Ceti	2 3	+ 3 27	20.5	44.7	2 54 08.8	32.2	36.6
11	13	α Piscis Aus.	1	—30 28	4.0	32.3	22 48 59.9	27.4	55.6
12		c^2 Aquarii	5	—22 02	14.2	40.8	23 01 06 1	31.7	58.1
13		φ Aquarii	5.6	— 6 55	25.1	49.6	23 06 13.4	37.1	1.6
14		τ Pegasi	6	+22 52	3.0	29.3	23 12 55.0	21.0	47.2
15		κ^1 Piscium	6.7	+ 0 23	7.2	31.6	23 18 55.2	18.8	43.3
16		b^4 Aquarii	5.6	—21 47	14.0	40.1	23 25 05.7	31.0	57.5
17		Moon I	(7.8)	— 2 16	22.4	47.5	23 28 11.7	35.7	0.6
18		λ Piscium	5.6	+ 0 54	16.7	41.1	23 34 05.0	28.8	53.0
19		n Piscium	6	— 3 39	6.8	31.1	23 39 55.0	18.8	43.1
20		φ Pegasi	6	+18 13	42.5	8.3	23 44 33.3	58.1	24.0
21		ω Piscium	4.5	+ 5 58	29.6	54.0	23 51 17.8	41.5	06.0
22		g Ceti	5	—18 13	53.9	19.3	23 55 44.5	9.5	35.3
23		α Andromedæ	1	+28 12	25.2	52.9	0 00 20.0	46.9	14.5
24		γ Pegasi	2.3	+14 17	22.6	48.0	0 05 12.5	36.5	2.0
25	19	τ Tauri	5	+22 39	1.6	28.2	4 32 53.9	19.7	46.0
26		μ Eridiani	5	— 3 33	57.0	21.2	4 37 45.0	9.0	33.2
27		r Orionis	5	+ 5 19	7.6	32.3	4 42 56.1	20.0	44.5
28		z Orionis	4.5	+ 2 10	22.0	46.4	4 46 10.1	33.7	58.0
29		s Orionis	5.6	+ 1 28	42.0	6.6	4 50 30.5	54.2	18.9
30		ι Tauri	5	+21 21	55.5	21.6	4 53 47.3	13.0	38.9
31		β Eridani	3	— 5 18	25.5	50.0	5 00 14.0	37.9	2.5
32		ι Leporis	5	—12 04	15.6	40.5	5 05 05.0	29.3	54.0
33		β Orionis	1	— 8 23	17.2	42.0	5 07 06.0	30.0	54.6
34		λ Leporis	5	—13 21	37.7	2.7	5 12 27.1	51.3	16.6
35		β Tauri	2	+28 28	31.5	59.1	5 16 26.2	55.3	21.0
36		t Orionis	5.6	— 1 13	3.0	27.5	5 21 51.3	15.0	39.4
37		Moon I	(14.1)	+28 09	17.8	46.2	5 27.14.0	42.0	10.5
38		σ Orionis	4.5	— 2 42	9.5	33.8	5 30 57.7	21.5	46.0
39		α Columbæ	2	—34 10	8.1	38.0	5 34 06 5	35.2	4.7
40		γ Leporis	4	—22 30	10.5	37.0	5 38 02.5	28.1	54.5
41		C Tauri	5	+27 34	37.3	5.0	5 43 31.3	57.5	26.0
42		α Orionis	1	+ 7 22	57.0	21.6	5 46 45.5	9.4	34.0
43		γ Columbæ	4	—35 18	7.8	38.0	5 52 07.0	36.0	6.0
44		ν Orionis	5	+14 47	51.2	16.7	5 58 41.3	5.6	31.0
45		θ Columbæ	5	—37 14	17.4	48.0	6 02 17.8	47.5	18.0
46		κ Aurigæ	4.5	+29 33	30.8	58.8	6 05 26.2	53.6	21.5
47	20	C Tauri	5	+27 34	36.0	3.1	5 43 30.0	56.6	24.5
48		α Orionis	1	+ 7 22	55.5	20.0	5 46 44.0	8.0	32.5
49		γ Columbæ	4	—35 18	6.0	36.2	5 52 05.5	34.6	4.5

December 12 —Examined adjustments of the transit instrument at 4*h*. p. m .A gale from NW. during the observations rendered the beat of the chronometer indistinct. ☽ ☌ λ and 78 Aquarii.

19. —Examined adjustments of level and collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
1	37	09.28	+ .103			+0	11.78	+0.42	1	36	57.60	1
1	44	10.98	+ .040				.78		1	43	59.24	2
1	52	40.40	+ .188				.78		1	52	28.81	3
1	58	22.54	+ .060	+0	11.78	+0	11.78	+0.42	1	58	10.82	4
22	33	40.90	— .163	+0	11.98	+0	11.88	+0.10	22	33	28.86	5
22	38	55.70	— .250				.88		22	38	43.57	6
22	44	27.96	— .248				.88		22	44	15.83	7
22	49	00.26	— .362		12.00		.88		22	48	48.02	*8
2	35	14.24	— .198		11.73		.90		2	35	02.14	9
2	54	08.56	— .194	+0	11.83	+0	11.90	+0.10	2	53	56.47	10
22	48	59.84	— .362	+0	11.60	+0	11.76	—0.10	22	48	47.72	11
23	01	06.18	— .314				.76		23	00	54.11	12
23	06	13.36	— .240				.76		23	06	01.36	13
23	12	55.10	— .100				.76		23	12	43.24	14
23	18	55.62	— .208				.76		23	18	43.65	15
23	25	05.66	— .313				.76		23	24	53.59	16
23	28	11.58	— .220				.76		23	27	59.60	17
23	34	04.92	— .205				.76		23	33	52.96	18
23	39	54.96	— .226				.76		23	39	42.97	19
23	44	33.24	— .124				.76		23	44	21.36	20
23	51	17.78	— .182				.76		23	51	05.84	21
23	55	44.50	— .295				.76		23	55	32.45	22
0	00	19.90	— .070		12.05		.76		0	00	08.07	23
0	05	12.32	— .144	+0	11.63	+0	11.76	—0.10	0	05	00.42	24
4	32	53.88	+ .115			+0	13.62	—1.74	4	32	40.37	25
4	37	45.08	+ .257				.61		4	37	31.73	26
4	42	56.10	+ .211				.61		4	42	42.70	27
4	46	10.04	+ .227				.61		4	45	56.66	28
4	50	30.44	+ .230				.60		4	50	17.07	29
4	53	47.26	+ .123				.60		4	53	33.78	30
5	00	13.98	+ .266				.59		5	00	00.66	31
5	05	04.88	+ .302				.59		5	04	51.59	32
5	07	05.96	+ .282	+0	13.57		.58		5	06	52.66	33
5	12	27.08	+ .309				.58		5	12	13.81	34
5	16	26.22	+ .078		13.59		.57		5	16	12.73	35
5	21	51.24	+ .245				.57		5	21	37.91	36
5	27	14.10	+ .080				.56		5	27	00.62	37
5	30	57.70	+ .253				.56		5	30	44.39	38
5	34	06.50	+ .439		13.58		.55		5	33	53.39	39
5	38	02.52	+ .361				.55		5	37	49.33	40
5	43	31.42	+ .084				.54		5	43	17.96	41
5	46	45.50	+ .200	+0	13.49		.54		5	46	32.16	42
5	52	06.96	+ .448				.53		5	51	53.88	43
5	58	41.16	+ .160				.53		5	58	27.79	44
6	02	17.74	+ .463				.52		6	02	04.68	45
6	05	26.18	+ .070			+0	13.52	—1.74	6	05	12.73	46
5	43	30.04	+ .032			+0	11.79	—1.35	5	43	18.28	47
5	46	44.00	+ .075	+0	11.76		.79		5	46	32.28	48
5	52	05.36	+ .168			+0	11.79	—1.35	5	51	53.74	49

No. 8. Recorded 22*h*. 48*m*. at transit over middle wire.

TRANSITS OBSERVED AT WASHINGTON IN 1839.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 20	ν Orionis	5	+14°47′	50.0	15.0	5 58 39.7	4.2	29.5
2	cont'd.	κ Aurigæ	4.5	+29 33	29.3	57.4	6 05 24.7	52.2	20.0
3		l Orionis	6.7	+10 00	41.6	6.5	6 08 30.7	55.0	19.5
4		μ Geminorum	3	+22 35	38.2	4.6	6 13 30.5	56.0	22.6
5		ν Geminorum	5	+20 19	49.8	16.0	6 19 41.3	6.6	32.5
6		f Monocerotis	5.6	+ 7 26	40.0	4.5	6 24 28.5	52.4	17.0
7		γ Geminorum	3	+16 32	51.3	16 8	6 28 41.5	6.2	31.5
8		ξ² Geminorum	4.5	+13 04	42.5	7.5	6 36 31.8	56.0	21.0
9		Moon II	(15.1)	+27 31	30.6	58.8	6 40 26.5	54.0	22.2
10		o¹ Canis Maj.	4.5	—23 59	50.0	16.8	6 47 42.8	8.7	35.5
11		ε Canis Maj.	2.3	—28 45	38.7	6.5	6 52 33.6	0.5	28.5
12		γ Canis Maj.	4	—15 24	54.5	19.6	6 56 44.2	8.9	34.0
13		τ Geminorum	5	+30 30	15.0	43.2	7 01 10.5	38.6	6.5
14		z Geminorum	6.7	+28 10	16.1	44.0	7 06 10.6	37.8	5.5
15		δ Geminorum	3.4	+22 16	55.0	21.5	7 10 47.3	13.0	39.3
16	25	α Hyd. & Crat.	4.5	—17 27	13.5	39.3	10 52 04.0	29.0	54.6
17		χ Leonis	5	+ 8 12	2.5	27.2	10 56 51.2	15.0	39.5
18		δ Leonis	3	+21 24	49.5	15.7	11 05 41.2	6.7	33.0
19		δ Hyd. & Crat	3.4	—13 55	36.3	1.5	11 11 26.0	50.5	15.5
20		γ Hyd. & Crat.	4	—16 48	8.5	34.0	11 16 58.8	23.5	49.0
21		Moon II	(20.3)	+ 3 03	33.5	58.4	11 21 22 6	46.5	11.5
22		ξ Hyd. & Crat.	4	—30 58	17.5	46.0	11 25 13.6	41.0	9.5
23		υ Leonis	4.5	+ 0 04	2.5	27.0	11 28 50.8	14.5	39.0
24		ζ Hyd & Crat	5	—17 27	54.2	19.5	11 36 44.5	9.5	35.0
25		β Virginis	3.4	+ 2 40	39.0	3.0	11 42 26.8	50.5	15.0

December 25.—Examined adjustments of the instrument.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
5	58	39.68	+ .060			+0	11.78	—1.35	5	58	27.96	1
6	05	24.72	+ .027				.77		6	05	12.98	2
6	08	30.66	+ .070				.77		6	08	18.96	3
6	13	30.38	+ .043	+0	11.85		.77		6	13	18.65	4
6	19	41.24	+ .048				.76		6	19	29.53	5
6	24	28.48	+ .075				.76		6	24	16.79	6
6	28	41.46	+ .057				.75		6	28	29.77	7
6	36	31.76	+ .064				.75		6	36	20.07	8
6	40	26.42	+ .032				.74		6	40	14.71	9
6	47	42.76	+ .139				.73		6	47	31.17	10
6	52	33.56	+ .151		11.72		.73		6	52	21.98	11
6	56	44.24	+ .120				.73		6	56	22.63	12
7	01	10.76	+ .024				.72		7	00	59.06	13
7	06	10.60	+ .030				.72		7	05	58.91	14
7	10	47.22	+ .044	+0	11.69	+0	11.71	—1.35	7	10	35.55	15
10	52	04.08	+ .582			+0	05.15	—1.27	10	52	59.51	16
10	56	51.08	+ .342				.15		10	56	46.27	17
11	05	41.22	+ .215	+0	05.14		.14		11	05	36.29	18
11	11	25.96	+ .547	+0	05.14		.14		11	11	21.37	19
11	16	58.76	+ .558				.14		11	16	54.18	20
11	21	22.50	+ .390				.13		11	21	17.76	21
11	25	13.52	+ .730				.12		11	25	09.13	22
11	28	50.76	+ .417				.12		11	28	46.06	23
11	36	44.54	+ .581				.12		11	36	40.00	24
11	42	26.86	+ .394			+0	05.11	—1.27	11	42	22.14	25

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Oct. 20	21 Andromedæ α	1	5	0 00 08 27	+3.624	0 00 04.65
Nov. 16		1	5	08.21	.460	04.75
Dec. 6		1	5	07.92	.272	04.65
13		1	5	08.07	.154	04.92
Means		1				0 00 04.742
Nov. 16	88 Pegasi γ	2.3	5	0 05 00.72	+3.572	0 04 57.15
Dec. 6		2 3	5	00.55	.395	57.16
13		2.3	5	00.42	.325	57.10
Means		2.3				0 04 57.137
Sept. 22	41 Piscium d	5.6	5	0 12 22.69	+3.673	0 12 19.02
Nov. 16		5.6	5	22.67	.662	19.01
Means		5.6				0 12 19.015
Nov. 17	31 Andromedæ δ	3	5	0 30 47.53	+3.443	0 30 44.09
Dec. 6		3	5	47.58	.523	44.06
Means		3				0 30 44.075
Oct. 21	16 Ceti β	2.3	5	0 35 34.43	+4.089	0 35 30.34
Nov. 17		2.3	5	34.20	3.989	30.21
Dec. 6		2	5	34.21	.828	30.38
Means		2.3				0 35 30.310
Oct. 21	63 Piscium δ	5.6	5	0 40 24.22	+3.991	0 40 20.23
Nov. 18		5	5	23.60	.801	19.80
Means		5				0 40 20.015
Oct. 21	67 Piscium k	6	3	0 47 23.82	+4.447	0 47 19.37
Nov. 17		6.7	5	23.30	3.827	19.47
18		6.7	5	22.81	.820	18.99
Means		6.7				0 47 19.277
Nov. 17	App. Sculp. α	5	5	0 50 54.84	+4.192	0 50 50.65
18		5	5	55.29	.183	51.11
Means		5				0 50 50.880
Nov. 17	71 Piscium ε	4.5	5	0 54 39.33	+3.873	0 54 35.46
18		4.5	5	39.44	.878	35.56
Means		4.5				0 54 35.510
Nov. 18	31 Ceti η	3.4	5	1 00 33.73	+3.969	1 00 29.761

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Nov. 18	85 Piscium ϕ	6	5	1 05 04.94	+3.942	1 05 00.998
Nov. 18	91 Piscium l	6	5	1 12 17.88	+4.016	1 12 13.864
Nov. 18	45 Ceti θ^1	3	5	1 16 02.81	+4.012	1 15 58.798
Oct. 22	99 Piscium η	5	5	1 22 56.79	+3.952	1 22 52.84
Nov. 18		4	5	56.56	4.015	52.55
Dec. 10		4	5	56.19	3.927	52.26
Means		4				1 22 52.550
Nov. 18	49 Ceti	5 6	5	1 26 50.25	+4.074	1 26 46.18
Dec. 10		6	5	50.50	3.944	46.56
Means		5.6				1 26 46.370
Oct. 22	102 Piscium π	6	5	1 28 38.03	+3.959	1 28 34.071
Dec. 10	105 Piscium	6	5	1 31 04.01	+3.975	1 31 00.035
Oct. 22	52 Ceti τ	3.4	5	1 36 39.30	+3.936	1 36 35.364
Dec. 10	110 Piscium o	5	5	1 36 57.60	+3.987	1 36 53.613
Oct. 22	53 Ceti χ^2	5	5	1 41 44.74	+4.008	1 41 40.73
Nov. 18		5	5	45.10	.078	41.02
Means		5				1 41 40.875
Dec. 10	2 Trianguli α	3.4	5	1 43 59.24	+4.139	1 43 55.101
Oct. 22	6 Arietis β	3	5	1 45 49.73	+4.042	1 45 45.69
Nov. 18		3	5	49.56	.170	45.39
19		3	5	49.81	.168	45.71
Means		3				1 45 45.597
Oct. 22	59 Ceti v^2	4.5	5	1 52 28.78	+4.067	1 52 24.71
Nov. 18		4.5	5	29.69	.143	25.55
19		4.5	5	29.44	.142	25.30
Dec. 10		4.5	5	28.81	.037	24.77
Means		4.5				1 52 25.082
Oct. 22	13 Arietis α	3	5	1 58 11.04	+4.104	1 58 06.94
Nov. 18		3	5	10.87	.264	06.61
19		3	5	11.05	.264	06.79
Dec. 10		3	5	10.82	.229	06.59
Means		3				1 58 06.732

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR. Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Oct. 22	6 Trianguli ι	5.6	5	2 03 07.31	+4.209	2 03 03.10
Nov. 18		6	5	07.01	.391	02.61
19		6	5	07.32	.391	02.93
Means		6				2 03 02.880
Oct. 22	22 Arietis θ^1	6	5	2 09 15.20	+4.030	2 09 11.17
Nov. 18		6	5	15.25	.280	10.97
19		6.7	5	15.28	.283	11.00
Means		6				2 09 11.047
Nov. 19	Fornacis χ	6	5	2 15 14.78	+3.728	2 15 11.052
Oct. 22	12 Trianguli c	6	5	2 18 49.20	+4.250	2 18 44.950
Oct. 22	78 Ceti ν	5	4	2 27 29.57	+3.953	2 27 25.62
Nov. 19		5	5	30.15	4.209	25.94
Means		5				2 27 25.780
Oct. 22	82 Ceti δ	4	5	2 31 17.96	+3.967	2 31 13.99
Nov. 19		4	5	18.42	4.185	14.23
Means		4				2 31 14.114
Oct. 22	86 Ceti γ	4	3	2 35 01.77	+3.976	2 34 57.79
23		4	5	01.75	.989	57.76
Nov. 19		3	5	02.11	4.220	57.89
Dec. 12		3	5	02.14	.234	57.91
Means		3.4				2 34 57.838
Jan. 23	42 Arietis π	5	5	2 40 20.03	+0.399	2 40 19.63
Oct. 22		5	5	23.04	4.103	18.94
Means		5				2 40 19.285
Jan. 23	2 Eridani τ^2	4.5	5	2 43 44.98	+0.686	2 43 44.29
Oct. 22		5	5	48.20	3.902	44.30
Means		4.5				2 43 44.295
Nov. 19	45 Arietis ρ^2	6	5	2 46 50.88	+4.420	2 46 46.460
Jan. 23	48 Arietis ε	5	5	2 50 01.56	+0.442	2 50 01.12
Sept. 26		5	5	04.81	3.659	01.15
Oct. 22		5	5	05.22	4.166	01.05
23		5	5	05.45	.182	01.27
Nov. 19		5	5	05.72	.487	01.23
20		5	5	05.70	.492	01.21
Means		5				2 50 01.171

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Oct. 23	92 Ceti α	2.3	5	2 53 56.01	+3.981	2 53 52.13
Nov. 19		2.3	5	56.54	4.263	52.28
20		2.3	5	56.44	.269	52.17
Dec. 12		2.3	5	56.47	.321	52.15
Means		2.3				2 53 52.182
Sept. 26	11 Eridani E	4	5	2 55 21.29	+3.423	2 55 17.867
Jan. 23	57 Arietis δ	4	5	3 02 26.60	+0.535	3 02 26.07
Sept. 26		4	5	29.82	3.616	26.20
Oct. 23		4	3	30.18	4.166	26.01
Nov. 19		4	5	30.69	.505	26.19
20		4	5	30.28	.511	25.77
Means		4				3 02 26.048
Nov. 20	12 Eridani	4	5	3 05 18.54	+4.185	3 05 14.355
Sept. 26	13 Eridani ζ	4.5	5	3 08 04.67	+3.373	3 08 01.297
Nov. 20	95 Ceti k^2	6	5	3 10 12.89	+4.244	3 10 08.646
Jan. 23	16 Eridani	3.4	5	3 12 22.31	+0.839	3 12 21.471
Sept. 26	64 Arietis *g*	5.6	5	3 14 52.65	+3.664	3 14 48.99
Nov. 20		6	5	53.64	4.657	48.98
Means		5.6				3 14 48.985
Sept. 26	5 Tauri *f*	5	5	3 22 03.25	+3.486	3 21 59.76
Nov. 20		5.6	5	04.32	4.462	59.86
Means		5				3 21 59.810
Jan. 23	18 Eridani ε	4	5	3 25 21.74	+0.810	3 25 20.93
Aug. 31		4	5	23.37	2.593	20.78
Sept. 26		4	5	24.01	3.286	20.72
Means		4				3 25 20.810
Nov. 20	19 Eridani τ^2	4.5	5	3 26 44.81	+4.120	3 26 40.690
Aug 31	10 Tauri E	5	5	3 28 42.10	+2.641	3 28 39.459
Nov. 20	Eridani *y*	5	5	3 31 23.60	+4.113	3 31 19.487
Jan. 23	17 Pleiadum *b*	4.5	5	3 35 20.34	+0.746	3 35 19.59
24		4.5	5	20.36	.735	19.62
Feb. 19		4.5	5	19.84	.351	19.59
Nov. 20		4.5	5	24.29	4.710	19.58
Means		4.5				3 35 19.595

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Sept. 26	23 Eridani δ	3.4	5	3 35 35.63	+3.230	3 35 32.400
Jan. 23	25 Tauri η	3	5	3 37 56.15	+0.768	3 37 55.38
24		3	5	37 56.30	.781	55.52
Feb. 19		3	5	37 55.70	.380	55.32
Aug. 31		3	5	37 58.24	2.828	55.41
Oct. 23		3	5	37 59.78	4.259	55.52
28		3	5	38 00.14	.364	55.78
Nov. 20		3	5	38 00.25	.727	55.52
Means		3				3 37 55.493
Sept. 26	27 (Pleiadum) f	5	3	3 39 39.68	+3.600	3 39 36.08
Nov. 20		5	5	40.79	4.861	35 93
Means		5				3 39 36.005
Jan. 23	44 Persei ζ	3.4	5	3 44 01.91	+0.812	3 44 01.10
24		3.4	5	02.22	.797	01.42
Feb. 19		3.4	5	02.05	.382	01.67
Means		3.4				3 44 01.396
Feb. 19	34 Eridani γ^1	2.3	5	3 50 31.46	+0 563	3 50 30.90
Aug. 31		2.3	5	33.54	2.405	31.14
Sept. 26		2.3	5	34.34	3.125	31.22
Oct. 23		2.3	5	34.96	.727	31.23
Nov. 20		2.3	5	35.39	4.137	31.25
21		2.3	5	35.52	.147	31.37
Means		2.3				3 50 31.185
Jan. 23	37 Tauri A^1	5	5	3 55 11.92	+0.878	3 55 11.03
24		5	5	12.02	.860	11.16
Sept. 26		5	5	14.73	3.524	11.21
Oct. 23		5	5	15.42	.212	11.21
Nov. 20		5	5	16.04	.722	11.32
21		5	5	15.83	.732	11.10
Means		5				3 55 11.172
Aug. 31	42 Tauri ψ	6	5	3 57 06.85	+2.813	3 57 04.037
Nov. 20	43 Tauri ω^1	6.7	5	3 59 52.52	+4.662	3 59 47.86
21		6.7	5	52.36	.683	47.65
Means		6.7				3 59 47.755
Jan. 24	38 Eridani o	4.5	5	4 04 01.00	+0.900	4 04 00.10
Aug. 31		4.5	5	02.73	2.377	00.35
Means		4.5				4 04 00.225

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Nov. 20	49 Tauri μ	5.6	5	4 06 52.21	+4.437	4 06 47.77
21		5.6	5	52.26	.457	47.80
Means		5.6				4 06 47.785
Jan. 24	54 Tauri γ	3.4	5	4 10 39.00	+0.962	4 10 38.04
Feb. 21		3	5	38.36	.586	37.77
Means		3				4 10 37.906
Sept. 26	41 Eridani X	3.4	5	4 11 51.42	+2.815	4 11 48.61
Nov. 20		3.4	5	52.28	3.969	48.31
21		3.4	5	52.63	.968	48.66
Means		3.4				4 11 48.527
Jan. 24	64 Tauri δ²	4.5	5	4 14 50.03	+0.989	4 14 49.041
Feb. 21	69 Tauri υ¹	5	5	4 16 41.16	+0.621	4 16 40.54
Aug. 31		5	5	43.24	2.652	40.59
Sept. 26		5	5	44.49	3.474	41.02
Nov. 20		5	5	45.80	4.746	41.05
21		5	5	45.54	.781	40.76
Means		5				4 16 40.792
Feb. 21	74 Tauri ε	4	5	4 19 13.54	+0.641	4 19 12.899
Feb. 21	87 Tauri α	1	5	4 26 41.63	+0.699	4 26 40.93
Oct. 25		1	5	45.37	4.100	41.27
28		1	5	45.45	.175	41.28
Nov. 21		1	5	45.90	.639	41.26
Means		1				4 26 41.185
Jan. 24	94 Tauri τ	5	5	4 32 36.21	+1.109	4 32 35.10
Feb. 21		5	5	35.68	0.736	34.94
Oct. 25		5	5	39.54	4.256	35.28
Dec. 19		5	5	40.37	5.191	35.18
Means		5				4 32 35.105
Oct. 25	57 Eridani μ	5	5	4 37 30.99	+3.720	4 37 27.27
Nov. 21		5	5	31.48	4.239	27.24
Dec. 19		5	5	31.73	.520	27.21
Means		5				4 37 27.240
Jan. 24	1 Orionis q	4	5	4 41 06.89	+1.125	4 41 05.77
Feb. 21		4	5	06.88	0.784	06.10
Means		4				4 41 05.934

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Oct. 25	3 Orionis r	4	5	4 42 44.90	+3.814	4 42 38.06
Nov. 21		4.5	5	42.61	4.387	38.22
Dec. 19		5	5	42.70	.703	38.00
Means		4.5				4 42 38.093
Feb. 21	8 Orionis z	4.5	5	4 45 52.35	+0.801	4 45 51.55
Dec. 19		4.5	5	56.66	4.651	52.01
Means		4.5				4 45 51.780
Nov. 21	9 Orionis ο²	5	5	4 47 23.96	+4.575	4 47 19.385
Dec. 19	10 Orionis s	5.6	5	4 50 17.07	+4.642	4 50 12.428
Nov. 21	63 Eridani	6	5	4 52 17.58	+4.102	4 52 13.478
Jan. 24	102 Tauri ι	4.5	5	4 53 29.01	+1.226	4 53 27.78
Feb. 21		4.5	5	29.45	0.880	28.57
Oct. 25		5	5	32.85	4.166	28.68
Dec. 19		5	5	33.78	5.190	28.59
Means		4.5				4 53 28.405
Jan. 24	2 Leporis ε	4	5	4 58 39.52	+1.289	4 58 38.23
Feb. 21		3.4	5	42.49	3.370	39.12
Oct. 25		4	5	39.93	0.864	39.07
Means		4				4 58 38.820
Dec. 19	67 Eridani β	3	5	5 00 00.66	+4.515	4 59 56.145
Nov. 21	69 Eridani λ	4.5	5	5 01 30.82	+4.108	5 01 26.712
Dec. 19	3 Leporis ι	5	5	5 04 51.59	+4.390	5 04 47.200
May 6	19 Orionis β	1	5	5 06 48.01	−0.084	5 06 48.09
Aug. 31		1	5	50.39	+1.986	48.40
Oct. 25		1	5	51.71	3.531	48.18
Nov. 21		1	5	52.34	4.104	48.24
22		1	5	52.33	.121	48.21
Dec. 19		1	5	52.66	.458	48.20
Means		1		.		5 06 48.220
Nov. 21	Columbæ ο	5	5	5 11 44.90	+3.728	5 11 41.17
22		5	5	44.62	.743	40.88
Means		5				5 11 41.025
Feb. 21	6 Leporis λ	4.5	5	5 12 10.51	+0.924	5 12 09.59
Dec. 19		5	5	13.81	4.370	09.44
Means		4.5				5 12 09.515

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Jan. 26	112 Tauri β	2	5	5 16 08.61	+1.400	5 16 07.21
Feb. 19		2	5	08.54	.120	07.42
21		2	5	08.30	.088	07.21
May 6		2	5	07.21	0.050	07.16
Sept. 28		3	5	10.69	3.465	07.23
Oct. 25		2	5	11.56	4.332	07.23
Nov. 21		2	5	12.24	5.047	07.19
22		2	5	12.26	.070	07.19
Dec. 19		2	5	12.73	.535	07.20
Means		2				5 16 07.227
Oct. 25	9 Leporis β	4	5	5 21 24.30	+3.269	5 21 21.031
Dec. 19	31 Orionis ι	5.6	5	5 21 37.91	+4.619	5 21 33.291
Sept. 28	34 Orionis δ	2	5	5 23 49.93	+2.851	5 23 47.08
Nov. 21		2	5	51.24	4.223	47.02
22		2	5	51.16	.246	46.91
Means		2				5 23 47.020
Sept. 28	11 Leporis α	3.4	4	5 25 40.49	+2.544	5 25 37.95
Oct. 25		3.4	5	41.25	3.293	37.96
Means		3.4				5 25 37.951
Jan. 26	26 Aurigæ l	5	5	5 28 19.73	+1.499	5 28 18.23
Sept. 28		6	5	21.65	3.463	18.19
Oct. 25		6	5	22.12	4.365	17.76
Nov. 21		6	5	22.94	5.129	17.81
22		6	5	23.17	.152	18.02
Means		6				5 28 18.000
Dec. 19	48 Orionis σ	4.5	5	5 30 44.39	+4.591	5 30 39.799
Jan. 26	Columbæ α	2	5	5 33 50.85	+1.486	5 33 49.36
Feb. 4		2	5	51.59	.357	50.23
19		2	5	50.65	.090	49.56
Sept. 28		2	5	51.67	2.161	49.51
Nov. 22		2	5	53.05	3.656	49.39
Dec. 19		2	5	53.39	4.011	49.38
Means		2				5 33 49.572
Sept. 28	13 Leporis γ	4	5	5 37 47.57	+2.366	5 37 45.20
Dec. 19		4	5	49.33	4.250	45.08
Means		5				5 37 45.140
Nov. 22	132 Tauri B	5.6	5	5 39 13.12	+4.910	5 39 08.210

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Jan. 26	136 Tauri C	4.5	5	5 43 14.28	+1.549	5 48 12.73
Sept. 28		5	5	15.96	3.324	12.64
Oct. 25		5	5	16.71	4.220	12.49
26		5	5	16.96	.251	12.71
Nov. 22		5	5	17.59	5.024	12.57
Dec. 19		5	5	17.96	.603	12.36
20		5	5	18.28	.573	12.71
Means		5				5 43 12.602
Feb. 4	58 Orionis α	1	5	5 46 29.72	+1.338	5 46 28.38
Sept. 28		1	5	30.04	2.874	27.17
Nov. 22		1	5	31.72	4.374	27.35
Dec. 19		1	5	32.16	.846	27.31
20		1	5	32.28	.857	27.42
Means		1				5 46 27.526
Oct. 25	139 Tauri	5.6	5	5 48 04.49	+4.150	5 48 00.34
26		5.6	5	04.50	.182	00.32
Means		5.6				5 48 00.329
Jan. 26	16 Leporis η	4	5	5 49 05.49	+1.369	5 49 04.121
Sept. 28	Columbæ γ	4	5	5 51 52.02	+1.973	5 51 50.05
Oct. 26		4	5	52.54	2.859	49.68
Nov. 22		4	5	53.27	3.553	49.72
Dec. 19		4	5	53.88	.961	49.92
20		4	5	53.74	.974	49.77
Means		4				5 51 49.828
Nov. 22	66 Orionis C	6	5	5 56 32.12	+4.276	5 56 27.844
Oct. 25	67 Orionis ν	5	5	5 58 26.48	+3.779	5 58 22.70
26		5.6	5	26.51	.791	22.72
Dec. 19		5	5	27.79	5.086	22.70
20		5	5	27.96	.096	22.86
Means		5				5 58 22.745
Nov. 22	19 Leporis τ	6	5	6 00 45.28	+3.784	6 00 41.496
Dec. 19	Columbæ θ	5	5	6 02 04.68	+3.909	6 02 00.771
Jan. 26	44 Aurigæ κ	4	5	6 05 08.84	+1.686	6 05 07.16
Sept. 28		4	2	11.25	3.339	07.91
Oct. 25		4	5	11.36	4.210	07.15
26		4	5	11.45	.242	07.21
Nov. 22		5	5	12.25	5.074	07.18
Dec. 19		4.5	5	12.73	.680	07.05
20		4.5	5	12.98	.697	07.28
Means		4				6 05 07.277

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Dec. 20	75 Orionis l	6.7	5	6 08 18.96	+4.948	6 08 14.012
Sept. 28	Columbæ κ	4.5	5	6 10 52.04	+1.817	6 10 50.223
Jan. 26	13 Geminorum μ	3	5	6 13 14.88	+1.629	6 13 13.25
Oct. 26		3	5	17.18	3.985	13.20
Nov. 22		3	5	17.98	4.779	13.20
Dec. 20		3	5	18.65	5.387	13.26
Means		3				6 13 13.227
Oct. 26	3 Canis Maj. λ	4	5	6 16 16.25	+2.720	6 16 13.53
Nov. 22		4	3	17.54	3.453	14.09
Means		4				6 16 13.809
Dec. 20	18 Geminorum ν	5	5	6 19 29.53	+5.302	6 19 24.228
Nov. 22	Canis Maj. D^1		5	6 22 15.58	+2.886	6 22 12.694
Dec. 20	13 Monocerotis f	5.6	5	6 24 16.79	+4.867	6 24 11.923
Jan. 26	24 Geminorum γ	3	5	6 28 26.11	+1.619	6 28 24.49
Oct. 26		3	5	28.12	3.740	24.38
Nov. 22		3	5	28.95	4.534	24.42
Dec. 20		3	5	29.77	5.159	24.61
Means		3				6 28 24.475
Jan. 26	27 Geminorum ε	3	5	6 34 03.32	+1.758	6 34 01.56
Oct. 26		3.4	5	05.29	3.962	01.33
Nov. 22		3	5	06.27	4.824	01.45
Means		3				6 34 01.447
Dec. 20	31 Geminorum ξ^2	4.5	5	6 36 20.07	+5.035	6 36 15.035
Jan. 26	9 Canis Maj. α	1	5	6 38 04.53	+1.503	6 38 03.03
April 19		1	5	03.42	0.320	03.10
20		1	5	03.52	.304	08.22
Oct. 26		1	5	06.02	2.818	03.20
Nov. 22		1	5	07.04	3.653	03.39
Means		1				6 38 03.188
Dec. 20	16 Canis Maj. o^1	4.5	5	6 47 31.17	+4.181	6 47 26.989
Jan. 26	21 Canis Maj. ε	2.3	5	6 52 19.63	+1.580	6 52 18.05
April 19		2.3	5	18.22	0.218	18.00
Dec. 20		2.3	5	21.98	3.965	18.02
Means		2.3				6 52 18.023

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Dec. 20	23 Canis Maj. γ	4	5	6 56 32.63	+4.277	6 56 28.353
Jan. 26	46 Geminorum τ	5	5	7 00 55.44	+1.948	7 00 53.49
Dec. 20		5	5	59.06	5.729	53.33
Means		5				7 00 53.410
Dec. 20	53 Geminorum z	6.7	5	7 05 58.91	+5.604	7 05 53.306
Dec. 20	55 Geminorum δ	3.4	5	7 10 35.55	+5.320	7 10 30.220
Nov. 19	10 Canis Min. α	1.2	5	7 30 55.98	+3.954	7 30 52.026
April 19	78 Geminorum β	2	5	7 35 28.49	+1.047	7 35 27.44
Nov. 19		2	5	31.92	4.557	27.36
Means		2				7 35 27.403
Mar. 24	6 Cancri	5.6	5	7 53 38.67	+1.687	7 53 36.98
Oct. 28		6	5	40.83	3.737	37.09
Means		5.6				7 53 37.035
Oct. 28	Argus ζ	3	5	7 57 57.59	+1.877	7 57 55.713
Mar. 24	15 Argus	3.4	5	8 00 42.72	+1.111	8 00 41.61
Oct. 28		3.4	5	43.86	2.345	41.52
Nov. 19		3.4	5	44.44	3.047	41.39
Means		3.4				8 00 41.503
Oct. 28	20 Argus	6.7	5	8 05 58.27	+2.526	8 05 55.744
Mar. 24	17 Cancri β	4	5	8 07 47.95	+1.478	8 07 46.472
Mar. 24	19 Cancri λ	6	5	8 10 58.53	+1.725	8 10 56.81
Oct. 28		5.6	5	11 00.70	3.475	57.23
Means		5.6				8 10 57.020
Mar. 24	31 Cancri θ	5.6	5	8 22 28.10	+1.686	8 22 26.41
Oct. 28		5.6	5	27.66	3.243	24.42
Means		5.6				8 22 25.415
Mar. 24	43 Cancri γ	5	5	8 33 58.97	+1.809	8 33 57.16
Oct. 28		5	5	34 00.57	3.258	57.31
Means		5				8 33 57.235
April 20	47 Cancri δ	4.5	5	8 35 33.21	+1.372	8 35 31.84
21		4.5	5	31.93	1.355	30.58
Means		4.5				8 35 31.210

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
April 20	11 Hydræ ε	4	5	8 38 15.85	+1.199	8 38 14.65
Oct. 28		4	5	17.51	2.873	14.64
Means		4				8 38 14.644
Mar. 25	16 Hydræ ζ	4	5	8 46 54.38	+1.612	8 46 52.77
April 20		4	5	53.86	.234	52.63
Oct. 28		4	5	55.45	2.806	52.64
Means		4				8 46 52.680
Mar. 24	77 Cancri ξ	5.6	5	9 00 07.42	+1.955	9 00 05.47
25		5.6	5	07.51	.944	05.57
April 21		5.6	5	07.02	.599	05.42
Means		5.6				9 00 05.487
Mar. 24	22 Hydræ θ	4.5	5	9 06 00.32	+1.659	9 05 58.66
25		4.5	5	00.64	.649	58.99
Means		4.5				9 05 58.825
Mar. 24	83 Cancri η	6	5	9 10 00.66	+1.917	9 09 58.74
25		6	5	00.94	.906	59.03
Means		6				9 09 58.888
April 22	30 Hydræ α	2	5	9 19 41.81	+1.237	9 19 40.57
May 19		2	3	41.56	0.846	40.71
Means		2				9 19 40.643
Mar. 25	4 Leonis λ	4.5	5	9 22 33.52	+2.074	9 22 31.45
April 21		4.5	5	33.11	1.721	31.39
22		4.5	5	33.13	.713	31.42
Means		4.5				9 22 31.417
April 22	16 Leonis ψ	6	5	9 34 58.83	+1.627	9 34 57.203
Jan. 30	17 Leonis ε	3	5	9 36 44.48	+2.020	9 36 42.46
May 19		3	5	43.57	1.402	42.17
Means		3				9 36 42.314
Jan. 30	24 Leonis μ	3	5	9 43 38.22	+2.068	9 43 36.15
Mar. 25		3	5	37.91	.234	35.68
26		3	5	37.59	.227	35.36
May 14		3	5	38.01	1.588	36.42
Means		3				9 43 35.902

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.,	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
Mar. 25	27 Leonis ν	5.6	5	9 49 35.05	+1.968	9 49 33.08
26		5.6	5	35.27	.961	33.31
Means		5.6				9 49 33.195
Mar. 25	30 Leonis η	3.4	5	9 58 35.05	+2.080	9 58 32.97
26		3.4	5	34.98	.075	32.91
Means		3.4				9 58 32.937
May 14	32 Leonis α	1	5	9 59 49.26	+1.466	9 59 47.794
Mar. 25	41 Hydræ λ^2	4.5	5	10 02 46.23	+1.684	10 02 44.55
26		4.5	5	46.32	.678	44.64
Means		4.5				10 02 44.594
Mar. 26	36 Leonis ζ	4.5	5	10 07 45.81	+2.255	10 07 43.56
May 11		4.5	5	45.42	1.709	43.71
14		4.5	5	45.84	.688	44.15
Means		4.5				10 07 43.807
April 22	41 Leonis γ	2	5	10 11 07.15	+1.924	10 11 05.23
23		2	5	07.08	.914	05.17
May 11		2	5	07.06	.687	05.37
14		2	5	07.17	.647	05.52
19		2	5	06.69	.592	05.10
Means		2				10 11 05.278
Mar. 26	42 Hydræ μ	4	5	10 18 20.55	+1.685	10 18 18.87
27		4	5	19.93	.682	18.25
May 11		4	5	19.92	.219	18.70
14		4	3	19.22	.184	18.04
Means		4				10 18 18.465
Mar. 26	47 Leonis ρ	4	5	10 24 21.59	+2.020	10 24 19.57
27		4	5	21.37	.016	19.35
April 22		4	5	21.62	1.801	19.82
23		4	5	21.50	.793	19.71
May 11		4	5	21.09	.598	19.49
14		4	5	21.56	.564	20.00
Means		4				10 24 19.657
May 6	42 Leonis Min. n	4.5	5	10 36 56.13	+2.113	10 36 54.017
Mar. 26	53 Leonis l	6	5	10 40 49.62	+2.084	10 40 47.54
27		6	5	49.15	.083	47.07
Means		6				10 40 47.301

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1839.
				h. m. s.	s.	h. m. s.
May 6	4 Hyd. & Crat. ν	4	5	10 41 43.05	+1.422	10 41 41.63
10		4	5	42.80	.383	41.42
11		4	5	42.74	.372	41.37
14		4	5	42.07	.519	40.55
Means		4				10 41 41.243
Mar. 27	54 Leonis	4.5	5	10 46 55.05	+2.392	10 46 52.66
May 5		4.5	5	54.90	.052	52.85
6		4.5	5	55.03	.040	52.99
10		4.5	5	55.17	1.991	53.18
11		4.5	5	55.22	.979	53.24
20		4.5	5	54.95	.870	53.08
Means		4.5				10 46 53.000
Mar. 27	7 Hyd. & Crat. α	4	5	10 51 57.74	+1.757	10 51 55.98
May 5		4	5	56.93	.459	55.47
6		4	5	58.07	.449	56.52
10		4	5	57.66	.400	56.26
11		4	5	57.24	.390	55.85
Dec. 25		4.5	5	59.51	3.532	55.98
Means		4				10 51 56.010
April 23	63 Leonis χ	4.5	5	10 56 44.38	+1.901	10 56 42.48
May 5		4.5	5	43.98	.788	42.19
6		4.5	5	44.32	.782	42.54
8		4.5	5	43.98	.761	42.22
10		4.5	5	44.10	.741	42.36
11		4.5	5	43.35	.731	41.62
20		4.5	4	43.90	.637	42.26
Dec. 25		5	5	46.27	3.913	42.36
Means		4.5				10 56 42.254
Mar. 27	11 Hyd. & Crat. β	4	5	11 03 46.89	+1.764	11 03 45.126
May 5	68 Leonis δ	3	5	11 05 34.20	+2.066	11 05 32.13
6		3	5	34.30	.055	32.24
8		3	5	34.17	.033	32.14
10		3	5	34.16	.011	32.15
20		3	5	34.03	1.879	32.15
Dec. 25		3	5	36.29	4.148	32.14
Means		3				11 05 32.160
May 8	12 Hyd. & Crat. δ	3.4	5	11 11 19.42	+1.594	11 11 17.83
10		3.4	5	19.39	.585	17.81
18		3.4	5	19.28	.497	17.78
20		3.4	5	19.30	.477	17.82

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Dec. 25	12 Hyd. & Crat. δ	3.4	5	11 11 21.37	+3.675	11 11 17.70
Means		3.4				11 11 17.786
Mar. 27	77 Leonis σ	4	5	11 12 51.80	+2.074	11 12 49.726
Mar. 27	15 Hyd. & Crat. γ	4	5	11 16 52.34	+1.830	11 16 50.51
May 5		4	5	52.24	.619	50.62
Dec. 25		4	5	54.18	3.479	50.70
Means		4				11 16 50.610
April 23	84 Leonis τ	4	5	11 19 41.44	+1.948	11 19 39.49
May 18		4	5	40.92	.738	39.18
20		4	5	40.86	.719	39.14
22		4	5	40.88	.700	39.18
Means		4				11 19 39.247
May 18	19 Hyd. & Crat. ξ	4	3	11 25 08.08	+1.411	11 25 06.67
20		4	5	07.91	.388	06.52
22		4	5	07.95	.363	06.59
Dec. 25		4	5	09.13	3.319	05.81
Means		4				11 25 06.397
Mar. 27	91 Leonis υ	4.5	5	11 28 44.02	+2.011	11 28 42.01
May 18		4.5	5	44.21	1.739	42.47
20		4.5	5	44.12	.731	42.39
22		4.5	5	43.99	.712	42.28
Dec. 25		4.5	5	46.06	3.639	42.42
Means		4.5				11 28 42.314
Mar. 27	27 Hyd. & Crat. ζ	4	5	11 36 38.37	+1.862	11 36 36.51
May 18		4	5	38.49	.613	36.88
22		4	5	38.00	.575	36.43
Dec. 25		5	5	40.00	3.387	36.61
Means		4				11 36 36.605
May 18	94 Leonis β	2.3	5	11 40 52.66	+1.991	11 40 50.669
Feb. 2	5 Virginis β	3.4	5	11 42 19.99	+1.369	11 42 18.62
Mar. 1		3.4	5	20.13	.869	18.26
May 22		3.4	5	20.27	.834	18.44
Dec. 25		3.4	5	22.14	3.826	18.31
Means		3.4				11 42 18.407
May 19	28 Hyd. & Crat.	4	5	11 44 49.76	+1.922	11 44 47.838
May 19	7 Virginis b	5.6	5	11 51 43.49	+1.910	11 51 41.58
22		5.6	5	43.85	.883	41.97
Means		5.6				11 51 41.775

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Feb. 2	9 Virginis *o*	4.5	5	11 57 02.02	+1.389	11 57 00.63
Mar. 1		4.5	5	02.22	.930	00.29
April 25		4.5	5	02.99	2.143	00.85
May 22		4.5	5	01.82	1.972	56 59.85
Means		4.5				11 57 00.405
Feb. 2	1 Corvi *α*	4.5	5	12 00 08.78	+1.070	12 00 07.71
Mar. 1		4.5	5	09.15	.622	07.53
May 22		4.5	5	09.28	.486	07.79
Means		4.5				12 00 07.677
May 15	2 Corvi *ε*	4	3	12 01 53.10	+1.751	12 01 51.35
19		4	5	53.09	.728	51.36
Means		4				12 01 51.355
May 15	4 Corvi *γ*	3	5	12 07 33.98	+1.969	12 07 32.01
22		3	5	33.81	.771	32.04
Means		3				12 07 32.025
Feb. 2	15 Virginis *η*	3.4	5	12 11 41.70	+1.211	12 11 40.49
Mar. 1		3.4	5	42.38	.774	40.61
May 15		3.4	5	42.37	.981	40.39
22		3.4	5	41.96	.966	40.00
Means		3.4				12 11 40.372
Feb. 2	16 Comæ Ber. *a*	4.5	5	12 18 57.68	+1.618	12 18 56.06
Mar. 1		4.5	5	57.89	2.224	55.67
May 15		4.5	4	58.23	.408	55.82
22		4.5	5	57 67	.342	55.33
Means		4.5				12 18 55.720
Mar. 1	21 Virginis *q*	5.6	5	12 25 30.04	+1.660	12 25 28.34
May 22		5.6	5	30.03	.938	28.09
Means		5.6				12 25 28.215
Feb. 2	9 Corvi *β*	2.3	5	12 25 57.68	+0.964	12 25 56.72
3		2.3	5	57.57	.991	56.58
Mar. 30		2.3	5	58.71	1.916	56.79
April 25		2.3	5	58.54	.972	56.57
26		2.3	5	58.94	.970	56.97
May 14		2.3	3	58.38	.902	56.48
15		2.3	5	58.45	.896	56.55
June 8		2.3	5	58.30	.718	56.58
Means		2.3				12 25 56.655

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
Feb. 2	29 Virginis γ^1	4	5	12 33 31.55	+1.096	12 33 30.45
3		4	5	31.52	.123	30.40
April 25		4	5	33.10	2.117	30.98
26		4	5	32.88	.116	30.76
27		4	5	32.90	.116	30.78
May 14		4	5	32.44	.056	30.38
15		4	5	32.19	.060	30.13
16		4	5	32.21	.046	30.16
June 7		4	5	32.44	1.903	30.54
8		4	5	32.53	.899	30.63
Means		4				12 33 30 521
June 8	Centauri *p*	6	3	12 42 00.17	+2.364	12 41 57.806
Feb. 2	40 Virginis ψ	5.6	5	12 46 00.25	+0.969	12 45 59.28
3		5.6	5	00.23	.997	59.23
Mar. 30		5.6	5	01.15	2.002	59.15
April 26		5.6	5	01.58	.106	59.47
Means		5.6				12 45 59.284
Mar. 3	43 Virginis δ	3.4	5	12 47 31.13	+1.759	12 47 29.37
May 14		3.4	5	32.04	2.165	29.88
16		3.4	5	31.88	.156	29.72
24		3.4	5	32.21	.114	30.10
June 7		3.4	3	31.55	.028	29.52
8		3.4	5	32.13	.017	30.11
Means		3.4				12 47 29.783
Mar. 30	36 Comæ Ber. *r*	4.5	5	12 51 00.25	+2.316	12 50 57.94
April 26		4.5	5	00.62	.417	58.20
27		4.5	5	00.38	.407	57.97
May 16		4.5	5	00.16	.355	57.81
24		4.5	4	00.06	.307	57.75
June 7		4.5	5	50 59.94	.149	57.79
8		4.5	5	51 00.23	.190	58.04
Means		4.5				12 50 57.929
Mar. 3	47 Virginis ϵ	3.4	5	12 54 11.52	+1.840	12 54 09.68
April 26		3	5	12.65	2.325	10.33
27		3	5	12.47	.318	10.15
May 16		3.4	5	12.24	.273	09.97
24		3.4	3	12.22	.237	09.98
June 7		3.4	5	11.84	.149	09.69
8		3.4	5	12.16	.132	10.03
Means		3.4				12 54 09.976
April 26	41 Comæ Ber. *u*	4.5	5	12 59 30.09	+2.630	12 59 27.460

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Feb 3	1 Hydræ con. ψ	4.5	5	13 00 24.65	+0.829	13 00 23.72
May 16		4.5	5	25.96	2.087	23.87
Means		4.5				13 00 23.795
Mar. 3	51 Virginis θ	4.5	5	13 01 38.97	+1.637	13 01 37.33
30		4.5	5	39.09	2.029	37.06
June 7		4.5	5	39.19	.057	37.13
8		4.5	5	39.47	.050	37.42
9		4.5	5	39.00	.044	36.96
17		4.5	5	38 87	1.986	36.88
Means		4.5				13 01 37.130
April 27	42 Comæ Ber. υ	4.5	5	13 02 12.15	+2.431	13 02 09.719
May 16	2 Hydræ con. γ	4.5	5	13 10 13.09	+2.371	13 10 10.72
June 7		4.5	5	13.05	.034	11.02
8		4.5	5	13.02	.032	10.99
9		4.5	5	12.97	.024	10.95
17		4.5	5	12.96	1.976	10.98
Means		4.5				13 10 10.873
Feb. 3	67 Virginis α	1	5	13 16 44.00	+0.832	13 16 43.17
4		1	5	44.18	.862	43.32
Mar. 3		1	5	44.82	1.551	43.27
30		1	5	45.24	.986	43.26
31		1	5	45.54	.999	43.54
April 26		1	5	45.55	2.177	43.37
27		1	5	45.33	.180	43.15
May 24		1	5	45.44	.191	43.25
June 20		1	5	45.26	.032	43.23
Means		1				13 16 43.283
June 8	Centauri d	5	2	13 21 45.62	+2.182	13 21 43.49
9		4	5	46.07	.122	43.95
15		4	5	45.89	.066	43 82
16		4	5	46.31	.055	44.26
17		4	5	46.28	.047	44.23
Means		4				13 21 43.950
Mar. 3	79 Virginis ζ	4	5	13 26 30.96	+1.602	13 26 29.36
30		4	5	31.66	2.047	29.61
31		4	5	31.70	.062	29.64
June 6		4	3	31.62	.215	29.41
7		4	5	31.96	.180	29.78
8		4	5	32.31	.207	30.10
9		4	5	32.03	.201	29.83
15		4	5	31.91	.165	29.75
16		4	5	31.81	.158	29.65

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
June 17	79 Virginis ζ	4	5	13 26 32.08	+2.174	13 26 29.91
20	cont'd.	4	5	31.54	.131	29.41
Means		4				13 26 29.677
Mar. 30	82 Virginis m	5.6	5	13 33 12.11	+1.990	13 33 10.12
31		5.6	5	12.19	2.006	10.18
June 20		5.6	5	12.01	.138	09.87
22		5.6	5	12.05	.134	09.92
Means		5.6				13 33 10.022
June 15	Centauri	5	5	13 36 35.77	+2.184	13 36 33.586
Feb. 3	86 Virginis O	6	5	13 37 22.77	+0.718	13 37 22.05
4		6	5	22.61	.750	21.86
Mar. 30		6	5	24.07	1.966	22.10
31		6	5	23.99	.983	22.01
June 20		6	5	24.24	2.153	
Means		6				13 37 22.005
Feb. 3	89 Virginis x	5.6	5	13 41 08.77	+0.716	13 41 08 05
4		5.6	5	08.71	.690	08.02
Mar. 3		5.6	5	09.88	1.445	08.44
4		5.6	5	09.06	.463	07.60
Means		5.6				13 41 08.026
Mar. 30	3 Centauri k	4.5	5	13 42 35.95	+1.979	13 42 33.97
31		4.5	5	36.38	.994	34.39
June 6		4.5	5	36.73	2.297	34.43
7		4.5	5	35.58	.286	33.30
8		4.5	5	35.70	.281	33 42
9		4.5	5	35.78	.276	33.50
10		4.5	5	35.40	.268	33.13
15		4.5	5	35.78	.235	33.55
16		4.5	5	35.80	.228	33.57
17		4.5	5	35.83	.220	33.61
22		4.5	5	36.06	.178	33 88
Means		4.5				13 42 33.705
Feb. 2	8 Bootis η	3	5	13 47 01.80	+0.906	13 47 00.89
3		3	5	02.23	.937	01.29
4		3	5	02.29	.968	01.32
Mar. 3		3	5	02.88	1.726	01.15
4		3	5	02.69	.748	00.94
31		3	5	03.21	2.249	00.96

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
June 6	8 Bootis η cont'd.	3	5	13 47 03.73	+2.444	13 47 01.29
7		4	4	03.73	.439	01.29
8		3	5	03.70	.434	01.27
9		3	5	03.64	.429	01.21
10		3	5	03.75	.424	01.33
15		3	5	03.67	.384	01.29
16		3	5	03.66	.376	01.28
17		3	5	03.65	.368	01.28
20		3	5	03.62	.344	01.28
22		3	5	03.69	.326	01.36
Means		3				13 47 01.215
Mar. 3	93 Virginis τ	4.5	5	13 53 29.16	+1.514	13 53 27.65
4		4.5	5	28.99	.532	27.46
April 27		4.5	5	29.79	2.316	27.47
June 6		4.5	5	30.12	.349	27.77
7		4.5	5	29.82	.345	27.48
9		4.5	5	30.11	.339	27.77
10		4.5	5	30.21	.333	27.88
15		4.5	5	29.77	.311	27.46
16		4.5	3	29.80	.304	27.50
17		4.5	5	29.73	.298	27.43
20		4.5	5	29.71	.280	27.43
22		4.5	5	29.83	.268	27.56
Means		4.5				13 53 27.572
Feb. 4	5 Hydræ Con. π	4.5	5	13 57 14.00	+0.551	13 57 13.45
Mar. 3		4.5	5	15.19	1.365	13.82
4		4.5	5	15.08	.394	13.69
31		4.5	5	15.70	.967	13.73
June 6		4.5	5	15.41	2.362	13.05
7		4.5	5	15.50	.362	13.14
9		4.5	5	15.36	.354	13.01
15		4.5	5	15.64	.325	13.32
Means		4.5				13 57 13.401
June 10	5 Centauri θ	2	5	13 57 16.27	+2 380	13 57 13.89
16		2	5	16.65	.350	14.30
17		2	5	16.97	.341	14.63
20		2	5	16.70	.319	14.38
22		2	5	16.80	.302	14.50
Means		2				13 57 14.340
Mar. 3	98 Virginis κ	4	5	14 04 20.52	+1.390	14 04 19.13
4		4	5	20.35	.419	18.93
June 6		4	5	21.60	2.374	19.23
7		4	5	21.34	.370	18.97
8		4	3	21.24	.369	18.87

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
June 9	98 Virginis cont'd κ	4	5	14 04 21.48	+2.365	14 04 19.12
10		4	5	21.52	.362	19.16
15		4	3	21.00	.343	18.66
16		4	5	21.39	.338	19.05
17		4	5	21.44	.333	19.11
20		4	5	21.13	.318	18.81
22		4	5	21.33	.306	19.02
Means		4				14 04 19.005
Feb. 4	16 Bootis α	1	5	14 08 19.98	+0.836	14 08 19.14
Mar. 3		1	5	20.81	1.612	19.20
4		1	5	20.93	.636	19.29
Means		1				14 08 19.212
Feb. 4	100 Virginis λ	4	5	14 10 25.17	+0.571	14 10 24.60
Mar. 31		4	5	26.49	1.948	24.54
June 22		4	5	27.08	2.345	24.73
Means		4				14 10 24.623
June 23	Centauri α		5	14 13 12.11	+3 128	14 13 08.982
June 20	8 Hydræ con.	5.6	5	14 18 48.54	+2.473	14 18 46.07
22		5.6	5	48.42	.461	45.96
Means		5.6				14 18 46.015
Mar. 4	25 Bootis ρ	4	5	14 24 55.07	+1.725	14 24 53.35
June 19		4	5	55.98	2.602	53.38
20		4	5	56.66	.594	54.07
22		4	5	55.94	.574	53.37
23		4	5	56.25	.574	53.68
Means		4				14 24 53.570
June 22	Lupi α	3	5	14 31 19.24	+2.808	14 31 16.43
23		3	5	19.86	.813	17.05
July 5		3	5	19.01	.666	16.34
Means		3				14 31 16.607
Mar. 4	29 Bootis π	3.4	5	14 33 11.23	+1.483	14 33 09.75
June 19		3.4	5	12.03	2.517	09.51
20		3.4	5	12.83	.511	10.32
Means		3.4				14 33 09.860
Feb. 4	36 Bootis ε	3	5	14 37 58.03	+0.700	14 37 57.33
Mar. 3		3	5	59.02	1.551	57.47

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Mar. 4	36 Bootis ϵ cont'd.	3	5	14 37 58.99	+1.578	14 37 57.41
June 19		3	5	38 00.02	2.610	57.41
22		3	5	37 59.93	.586	57.34
July 4		3	5	59.57	.480	57.09
Means		3				14 37 57.343
Feb. 4	9 Libræ α^2	3	5	14 41 59.56	+0.387	14 41 59.17
Mar. 3		3	5	42 00.38	1.222	59.16
4		3	5	00.41	.249	59.16
5		3	5	41 59.94	.276	58.66
June 19		3	5	42 01.64	2.556	59.08
20		3	5	01.69	.557	59.13
22		3	5	01.65	.547	59.10
July 4		3	5	01.12	.477	58.64
5		3	5	01.62	.470	59.15
Means		3				14 41 59.080
Feb. 4	1690 A. S. C.	6	5	14 48 05.07	+0.322	14 48 04.75
6		6	5	05.40	0.390	05.01
Mar. 4		6	5	06.85	1.216	05.63
5		6	5	06.30	.246	05.05
Means		6				14 48 05.110
July 4	Centauri χ	3	5	14 48 46.38	+2.785	14 48 43.60
5		3	5	46.12	.773	43.35
Means		3				14 48 43.475
Feb. 4	20 Libræ	3.4	5	14 54 40.23	+0.262	14 54 39.97
6		3.4	5	40.53	.332	40.20
Mar. 4		3.4	5	41.16	1.186	39.97
5		3.4	5	41.30	.217	40.08
June 19		3.4	5	42.79	2.692	40.10
22		3.4	5	42.58	.684	39.90
23		3.4	5	42.75	.694	40.06
July 4		3.4	5	42.87	.626	40.24
5		3.4	5	42.46	.619	39.84
7		3.4	5	42.21	.612	39.60
Means		3.4				14 54 39.999
Feb. 6	24 Libræ ι^1	5.6	5	15 08 04.10	+0.322	15 03 03.78
Mar. 5		5.6	5	04.98	1.086	03.89
June 22		5.6	5	06.84	2.687	04.15
23		5.6	5	06.52	.697	03.82
Means		5.6				15 03 03.910
Feb. 6	3 Corona Bor. β	4	5	15 21 11.83	+0.444	15 21 11.39
Mar. 5		4	5	13.58	1.330	12.25

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h m. s.
June 23	3 Corona Bor. cont'd. β	4	5	15 21 14.23	+2.718	15 21 11.51
July 4		4	5	13.93	.628	11.31
5		3.4	5	14.11	.618	11.49
7		3.4	5	13.88	.588	11.29
Means		4				15 21 11.540
Mar. 5	38 Libræ γ	4.5	5	15 26 32.77	+1.090	15 26 31.680
Feb. 6	5 Corona Bor. α	2	5	15 27 52.74	+0.385	15 27 52.35
June 23		2	5	55.06	2.706	52.35
July 4		2	5	55.19	.635	52.45
5		2	5	54.93	.626	52.30
7		2	5	54.94	.608	52.33
21		2.3	5	54.80	.447	52.35
Means		2				15 27 52.359
July 21	42 Libræ χ	5.6	5	15 30 49.14	+2.746	15 30 46.394
June 23	Lupi h	6	5	15 32 15.60	+2.158	15 32 13.44
July 4		6	5	15.14	.208	12.93
5		6	5	15.10	.245	12.86
7		6	5	14.92	.320	12.60
Means		6				15 32 12.956
Mar. 5	44 Libræ η	4.5	5	15 35 02.95	+1.052	15 35 01.898
July 5	32 Serpentis μ	3.4	5	15 41 15.98	+2.732	15 41 13.25
7		3.4	5	16.16	.719	13.44
21		3.4	5	15.69	.625	13.07
Means		3.4				15 41 13.253
Feb. 6	1 Scorpii b	5	5	15 41 18.79	+0.094	15 41 18.70
Mar. 5		5	5	19.80	1.023	18.78
Means		5				15 41 18.736
June 23	5 Scorpii ρ	4	5	15 47 00.76	+3.254	15 46 57.51
July 10		4	5	00.85	.027	57.82
Means		4				15 46 57.665
June 23	6 Scorpii π	3.4	5	15 49 11.33	+3.041	15 49 08.289
Feb. 6	7 Scorpii δ	3	5	15 50 49.70	+0.096	15 50 49.60
July 10		3	5	52.87	2.954	49.92
15		3	5	52.06	.916	49.14
21		3	5	52.27	.881	49.39
Means		3				15 50 49.512

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Feb. 6	8 Scorpii β^1	2	5	15 56 05.28	+0.062	15 56 05.22
June 23		2	5	08.18	2.971	05.21
July 15		2	5	07.64	.978	04.66
Means		2				15 56 05.030
July 15	Scorpii ν^2	6	5	16 02 40.54	+2.953	16 02 37.59
17		6	5	40.70	.943	37.76
Means		6				16 02 37.675
June 23	14 Scorpii ν^1	4	5	16 02 41.98	+3.008	16 02 38.97
25		4	5	41.58	2.997	38.53
July 9		4	5	41.64	.982	38.66
15		4	5	41.88	.953	38.93
17		4	5	41.70	.943	38.76
21		4	5	41.57	3.003	38.57
Means		4				16 02 38.737
June 23	1 Ophiuchi δ	3	5	16 05 57.72	+2.838	16 05 54.88
25		3	5	57.36	.840	54.52
Means		3				16 05 54.701
June 23	20 Scorpii σ	4	5	16 11 28.21	+3.136	16 11 25.07
25		4	5	27.78	.141	24.64
July 9		4	5	28.07	.133	24.94
15		4	5	27.78	.112	24.67
16		4	5	27.91	.103	24.81
17		4	5	28.04	.093	24.95
Means		4				16 11 24.847
June 25	20 Herculis γ	3.4	5	16 14 51.79	+2.778	16 14 49.01
July 9		4	5	51.79	.728	49.06
10		3.4	5	51.99	.729	49.26
15		4	5	51.50	.694	48.81
16		4	5	51.78	.685	49.10
17		4.5	5	51.55	.676	48.87
21		3.4	3	51.64	.631	49.01
Means		3.4				16 14 49.017
June 25	21 Scorpii α	1	5	16 19 36.07	+3.197	16 19 32.87
30		1	5	36.17	.212	32.96
July 9		1	5	36.03	.203	32.83
10		1	5	36.03	.202	32.83
15		1	5	35.87	.187	32.68
16		1	5	36.02	.182	32.84
17		1	5	35.99	.177	32.81

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
July 21	21 Scorpii α cont'd.	1	5	16 19 35.96	+3.144	16 19 32.82
Aug. 18		1	5	35.65	2.836	32.81
19		1	5	35.65	.822	32.83
Means		1				16 19 32.828
June 25	27 Herculis β	2.3	5	16 23 20.61	+2.792	16 23 17.82
July 9		3	5	20.64	.743	17.90
10		3	5	20.86	.744	18.12
15		2.3	5	20.25	.712	17.54
16		3	5	20.52	.703	17.82
17		3	5	20.55	.695	17.86
21		3	5	20.47	.652	17.82
Aug. 18		2.3	5	20.32	.286	18.03
Means		3				16 23 17.864
July 21	23 Scorpii τ	3.4	3	16 25 55.49	+3.228	16 25 52.262
June 25	13 Ophiuchi ζ	3 4	5	16 28 20 89	+2.986	16 28 17.90
July 9		3.4	5	20.79	.985	17.81
10		3.4	5	20.89	.997	17.89
15		3.4	5	20.26	.979	17.28
16		3.4	5	20.58	.971	17.61
17		3.4	5	20.67	.963	17.71
Means		3.4				16 28 17.700
June 25	26 Scorpii ε	3	5	16 39 48 83	+3.474	16 39 45.36
30		3	5	48.54	.492	45.05
July 9		3	5	48.61	.495	45.12
15		3	5	48.67	.486	45.18
16		3	5	48.86	.470	45.39
17		3	5	48.55	.470	45.08
18		3	3	48.60	.472	45.13
Aug. 18		3	5	48.26	.127	45.13
19		3	5	48.28	.128	45.15
Means		3				16 39 45.177
June 25	25 Ophiuchi ι	4	5	16 46 26.19	+2.856	16 46 23.33
July 15		5	5	26.03	.838	23.19
17		5	5	26.06	.837	23.22
18		5	5	25.85	.836	23.01
Means		5				16 46 23.187
June 25	27 Ophiuchi κ	4	5	16 50 05.61	+2.866	16 50 02.74
July 9		4	3	05.77	.877	02.89
15		4	5	05.51	.861	02.65
17		4	5	05.61	.850	02.76
18		4	5	05.38	.845	02.54
Means		4				16 50 02.776

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
June 25	58 Herculis ε	3	5	16 54 10.62	+2.843	16 54 07.78
30		3	5	11.01	.833	08.18
July 9		3	5	10.52	.797	07.72
15		3	5	10.57	.759	07.81
17		3	5	10.62	.746	07.77
18		3	5	10.53	.730	07.80
Aug. 18		3	5	10.09	.300	07.79
19		3	5	09.98	.265	07.72
Means		3				16 54 07.821
June 25	Scorpii η	4	5	17 00 43.02	+3.956	17 00 39.06
30		4	5	42.25	.978	38.27
July 9		3	5	42.57	.993	38.58
15		3	5	42.23	.992	38.24
16		3	5	42.72	.987	38.73
17		3	5	42.40	.987	38.41
Means		3				17 00 38.548
April 4	35 Ophiuchi η	2.3	5	17 01 12.57	+1.573	17 01 11.00
Aug. 18		3	5	11.95	2.956	08.99
19		3	5	11.66	.933	08.73
Means		3				17 01 08.860
April 4	36 Ophiuchi A	4.5	5	17 05 29.43	+1.644	17 05 27.79
June 25		4.5	5	31.05	3.397	27.65
July 17		5.6	5	30.77	.434	27.34
18		5.6	5	30.76	.429	27.33
Aug. 18		4.5		30.60	.168	27·43
19		4.5		30.63	.144	27.49
Means		4.5				17 05 27.505
July 30	64 Herculis α	3.4	5	17 07 21.03	+2.787	17 07 18.243
July 17	65 Herculis δ	3.4	5	17 08 27.70	+2.801	17 08 24.90
18		3.4	5	27.81	.797	25.01
Aug. 18		4	5	27.70	.435	25.27
Means		3.4				17 08 25.060
April 4	40 Ophiuchi ρ	4.5	5	17 11 23.04	+1.574	17 11 21.466
June 25	42 Ophiuchi θ	3.4	5	17 12 11.35	+3.390	17 12 07.96
July 17		4.5	5	11.12	.454	07.67
18		4.5	5	11.16	.450	07.71
23		3.4	5	10.95	.439	07.51
30		3.4	5	10.99	.403	07.59
Aug. 18		3.4	5	11.17	.215	07.96
Means		3.4				17 12 07.733

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
June 25	45 Ophiuchi *d*	5	5	17 17 08.86	+3.536	17 17 05.32
July 17		4.5	5	08.52	.612	04.91
18		4.5	5	08.51	.621	04.89
23		5	5	08.36	.591	04.77
30		5	5	08.66	.561	05.10
Aug. 19		5	5	08.46	.340	05.12
Means		5				17 17 05.018
July 17	35 Scorpii λ	2.3	5	17 22 45.25	+3.882	17 22 41.37
18		2.3	5	45.48	.888	41.59
23		3	5	45.48	.878	41.60
Means		2.3				17 22 41.520
April 4	76 Herculis λ	4.5	5	17 24 15.44	+1.409	17 24 14.03
July 18		4	3	16.29	2.821	13.47
23		4.5	3	16.45	.765	13.69
30		4.5	5	16.74	.730	14.01
Aug. 19		4.5	5	16.38	.468	13.91
Means		4.5				17 24 13.822
July 23	Scorpii κ	3	5	17 31 26.01	+4.007	17 31 22.003
Aug. 19	60 Ophiuchi β	3	5	17 35 34.20	+2.798	17 35 31.402
June 25	3 Sagittarii *p*	5	5	17 37 29.59	+3.540	17 37 26.05
July 23		6	5	29.47	.657	25.81
Means		5.6				17 37 25.930
April 4	86 Herculis μ	4	5	17 40 10.97	+1.193	17 40 09.78
July 23		4	5	12.56	2.814	09.75
Means		4				17 40 09.765
Aug. 19	89 Herculis	5.6	5	17 48 58.09	+2.547	17 48 55.543
June 25	64 Ophiuchi ν	4	5	17 50 13.29	+3.166	17 50 10.12
July 23		4	5	11.14	.300	10.84
Means		4				17 50 10.480
April 4	92 Herculis ξ	4	5	17 51 31.85	+1.104	17 51 30.75
5		4	5	31.66	.140	30.52
Means		4				17 51 30.633
April 4	10 Sagittarii γ^2	4	5	17 55 30.21	+1.488	17 55 28.72
5		4	5	29.84	.524	28.32
July 23		4	5	32.15	3.836	28.31
31		4	5	32.01	.812	28.20
Aug. 19		4	5	32.35	.645	28.71
Means		4				17 55 28.452

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
July 23	72 Ophiuchi S^2	4.5	5	17 59 45.80	+3.028	17 59 42.77
31		4	5	45.56	2.901	42.66
Means		4				17 59 42.715
April 4	103 Herculis *o*	4	5	18 01 17.06	+1.033	18 01 16.03
5		4	5	16.53	.065	15.47
Aug. 19		4	5	18.25	2.557	15.69
Means		4				18 01 15.730
April 5	13 Sagittarii μ^1	3.4	5	18 04 09.54	+1.384	18 04 08.16
May 3		3 4	5	10.21	2.252	07.96
July 23		4	5	11.74	3.586	08.15
Aug. 19		3.4	5	11.90	.456	08.44
Means		3.4				18 04 08.178
April 4	19 Sagittarii δ	3.4	5	18 10 43.32	+1.415	18 10 41.91
5		3.4	6	42.83	.453	41.38
May 3		3.4	5	43.70	2.389	41.31
July 23		3.4	5	45.15	3.877	41.27
31		4	5	45.26	.874	41.39
Means		3.4				18 10 41.452
Aug. 19	107 Herculis *t*	6	5	18 14 47.25	+2.538	18 14 44.712
April 5	22 Sagittarii λ	4	5	18 18 03.43	+1.363	18 18 02.07
May 3		4	5	04.60	2.275	02.32
July 23		4	5	05.99	3.764	02.23
Means		4				18 18 02.207
July 11	Corona Aus. λ	6	5	18 32 47.56	+3.323	18 32 44.137
May 3	27 Sagittarii φ	4.5	5	18 35 38.19	+2.241	18 35 35.95
July 11		5	3	39.80	3.814	35.99
23		4.5	5	39.66	.883	35.78
Means		4.5				18 35 35.907
April 5	34 Sagittarii σ	3	5	18 45 18.05	+1.250	18 45 16.80
May 3		3	5	19.07	2.191	16 88
July 11		3	5	20.52	3.802	16.72
23		3	5	20.83	.882	16.95
Means		3				18 45 16.838
May 3	40 Sagittarii τ	4	5	18 56 54.37	+2.167	18 56 52.203
May 3	41 Sagittarii π	4.5	5	19 00 13.41	+2.086	19 00 11.37
July 11		3.4	5	14.89	3.658	11.23
Means		4				19 00 11.300
May 4	30 Aquilæ δ	3.4	5	19 17 24.28	+1.658	19 17 22.622

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires ob served.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
May 3	6 Vulpeculæ b	4	5	19 22 01.68	+1.390	19 22 00.29
4		4	5	02.20	.421	00.78
June 28		4	5	03.27	2.742	00.53
July 25		4	5	04.03	.982	01.05
Means		4				19 22 00.663
May 3	52 Sagittarii h^2	4.5	5	19 26 56.51	+1.982	19 26 54.53
4		4.5	5	56.37	2.015	54.36
June 28		4.5	5	57.91	3.572	54.34
July 26		4.5	5	58.45	.950	54.40
Means		4.5				19 26 54.408
May 3	12 Cygni φ	4	5	19 33 02.23	+1.265	19 33 00.97
4		4	5	03.26	.297	01.96
June 28		4	5	04.05	2.680	01.37
July 26		5	5	04.29	.934	01.36
Means		4				19 33 01.415
May 4	50 Aquilæ γ	3	5	19 38 37.79	+1.460	19 38 36.33
June 28		3	5	39.09	2.844	36.25
July 25		3	5	39.46	3.160	36.29
26		3	5	39.22	.166	36.05
Aug. 31		3	5	39.39	.088	36.30
Sept. 2		3	5	39.37	.066	36.30
15		3	5	39.23	2.909	36.32
26		3	5	39.19	.750	36.34
Means		3				19 38 36.273
June 28	57 Sagittarii	5.6	5	19 42 53.62	+3.382	19 42 50.238
July 25	53 Aquilæ α	1.2	5	19 42 58.96	+3.205	19 42 55.76
Aug. 31		1.2	5	58.92	.160	55.76
Sept. 2		1.2	5	58.89	.140	55.75
15		1.2	5	58.60	2.999	55.60
26		1.2	5	58.64	.838	55.80
Oct. 16		1.2	5	58.07	.522	55.55
Means		1.2				19 42 55.703
May 4	59 Sagittarii b	5	5	19 47 05.77	+1.954	19 47 03.816
Aug. 23	60 Aquilæ β	3.4	5	19 47 27.25	+3.251	19 47 24.00
31		3.4	5	27.59	.247	24.34
Sept. 2		3.4	5	27.50	.227	24.27
15		3.4	5	27.50	.036	24.46
26		3.4	5	27.01	2.885	24.13
Oct. 16		4.5	5	26.79	.559	24.23
Means		3.4				19 47 24.238

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
June 28	62 Sagittarii *c*	4.5	5	19 52 48.73	+3.622	19 52 45.11
July 25		4.5	5	49.15	4.082	45.07
26		4.5	3	49.49	.082	45.41
Oct. 16		4.5	5	48.64	3.442	45.20
Means		4.5				19 52 45.200
May 4	65 Aquilæ θ	3.4	5	20 03 01.47	+1.467	20 03 00.00
June 28		3.4	5	02.76	3.018	02 59.74
July 25		3.4	5	03.07	.425	59.65
26		3.4	5	03.17	.368	59.80
Oct 16		3.4	5	02.67	2.817	59.85
Means		3.4				20 02 59.808
June 28	5 Capricorni α^1	4	5	20 08 46.22	+3.183	20 08 43.037
June 28	6 Capricorni α^2	3	5	20 09 10.22	+3.183	20 09 07.037
Oct. 16	7 Capricorni σ	5.6	5	20 10 09.34	+3.302	20 10 06.038
June 28	10 Capricorni π	5	5	20 18 09.20	+3.281	20 18 05.92
July 26		5	5	09.88	.774	06.11
Sept. 18		5	5	09.83	.723	06.11
Means		5				20 18 06.047
June 28	41 Cygni *i*	4.5	5	20 22 51.88	+2.529	20 22 49.35
July 25		4.5	5	52.76	.932	49.83
Oct. 16		4.5	5	51.59	.189	49.40
Means		4.5				20 22 49.527
June 29	6 Delphini β	4	5	20 30 02.26	+2.686	20 29 59.57
July 25		5	5	03.29	3.098	30 00.19
26		4	5	02.86	.113	29 59.75
Oct. 16		4	5	02.73	2.620	30 00.11
Means		4				20 29 59.905
June 28	16 Capricorni ψ	4 5	5	20 36 36 61	+3.421	20 36 33.19
29		4.5	5	36.72	.446	33.27
July 25		4.5	5	37.12	.972	33.15
Sept. 18		4.5	5	37.09	4.024	33.07
19		4.5	5	37.04	.012	33.03
Oct. 16		4.5	5	36.74	3.627	33.12
Means		4.5				20 36 33.186
June 28	Microscopi α	4.5	5	20 39 57.77	+3.708	20 39 54.06
29		4.5	5	57.76	.736	54.02
Means		4.5				20 39 54.040
June 29	6 Aquarii μ	4.5	5	20 44 00.72	+3.014	20 43 57.706

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
Oct. 16	32 Vulpeculæ q	5 6	5	20 47 44.61	+2.411	20 47 42.20
17		5.6	5	44.59	.399	42.19
Means		5.6				20 47 42.195
June 28	Microscopi γ		5	20 51 28.07	+3.592	20 51 24.48
29			5	27.97	.620	24.35
Means						20 51 24.415
Aug. 23	22 Capricorni η	5	2	20 55 18.32	+4.021	20 55 14.30
Oct. 16		5	5	17.73	3.567	14.16
17		5.6	5	17.68	.552	14.13
Means		5				20 55 14.163
June 28	23 Capricorni θ	5.6	5	20 56 56.49	+3.025	20 56 53.37
29		5.6	5	56.39	.151	53.24
Means		5.6				20 56 53.302
Oct. 16	13 Aquarii ν	5	5	21 00 52.59	+3.374	21 00 49.22
17		5	5	52.41	.360	49.05
Means		5				21 00 49.135
June 28	64 Cygni ζ	3	5	21 06 07.72	+2.264	21 06 05.46
29		3	5	07.66	.290	05.36
Sept. 20		3	5	08.17	.890	05.28
Means		3				21 06 05.365
Oct. 16	29 Capricorni ι	5.6	5	21 06 53.24	+3.498	21 06 49.74
17		4	5	53.23	.485	49.75
Means		4.5				21 06 49.745
Aug. 23	32 Capricorni ι	5	5	21 13 20.59	+3.946	21 13 16.544
June 29	1 Pegasi ε	4	5	21 14 41.14	+2.468	21 14 38.672
June 29	34 Capricorni ζ	4	5	21 17 31.22	+3.198	21 17 28.02
Oct. 17		4	4	31.56	.734	27.83
Means		4				21 17 27.925
Aug. 23	22 Aquarii β	3	5	21 23 08.43	+3.663	21 23 04.77
Sept. 19		3	5	08.37	.620	04.75
Oct. 17		4	5	08 08	.339	04.74
Means		3				21 23 04.753
Aug. 24	39 Capricorni ε	5	5	21 28 07.71	+4.034	21 28 03.676

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	s.	h. m. s.
June 30	40 Capricorni γ	3	5	21 31 12.77	+3.017	21 31 09.75
Aug. 23		4	5	13.86	.947	09.91
24		4	5	13 86	.942	09.92
Sept. 20		4	5	13.93	.916	10.02
Oct. 17		4	5	13.23	.643	09.59
Means		4				21 31 09.838
Aug. 24	9 Piscis Aus. ι	4.5	5	21 35 25.24	+4.534	21 35 20.706
June 30	8 Pegasi ε	2.3	5	21 36 19.40	+2.632	21 36 16.768
June 29	49 Capricorni δ	3.4	5	21 38 11.83	+2.945	21 38 08.89
30		3.4	5	11.72	.973	08.75
Aug. 24		3.4	5	12.95	3.937	09.01
Sept. 19		3.4	5	13.36	.926	09.43
20		3.4	5	12.46	.920	08.54
Oct. 17		3.4	5	12.23	.654	08.58
Means		3.4				21 38 08.867
Aug. 23	14 Pegasi	5	5	21 42 47.01	+3.136	21 42 43.87
24		5	3	46.97	.140	43.83
Means		5				21 42 43.850
June 29	Gruis γ	4	5	21 44 13.35	+3.544	21 44 09.81
30		4	5	13.27	.577	09.69
Means		4				21 44 09.750
Aug. 23	16 Pegasi B	5.6	5	21 45 47.78	+3.185	21 45 44.60
24		5.6	5	47.80	.189	44.61
Means		5.6				21 45 44.605
June 29	12 Piscis Aus. μ	6	5	21 51 37.94	+3.288	21 51 34.65
30		6	5	37.70	.219	34.48
Means		6				21 51 34.565
June 29	33 Aquarii ι	4.5	5	21 57 47.14	+2.797	21 57 44.34
30		4.5	5	47.11	.826	44.28
Aug. 24		4.5	5	48.31	3.870	44.44
Oct. 17		4.5	5	47.95	.614	44.34
Means		4.5				21 57 44.350
Sept. 20	43 Aquarii θ	4.5	5	22 08 23.63	+3.679	22 08 19 951
June 30	2656 A. S. C.	6	5	22 08 24.77	+2.681	22 08 22.089

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
June 30	48 Aquarii γ	4	5	22 13 23.04	+2.528	22 13 20.512
Aug. 24	32 Pegasi C	5.6	5	22 13 57.25	+3.197	22 13 54.053
June 30	57 Aquarii σ	5	5	22 22 09.85	+2.636	22 22 07.21
Sept. 20		5	5	11.26	3.867	07.39
Means		5				22 22 07.300
Dec. 9	17 Piscis Aus. β	4	5	22 22 23.72	+3.526	22 22 20.194
June 30	62 Aquarii η	4	5	22 27 07.56	+2.441	22 27 05.12
Aug. 24		4	5	08.75	3.561	05.19
Dec. 9		4	5	07.80	.016	04.78
Means		4				22 27 05.030
June 30	18 Piscis Aus.	4	5	22 31 47.43	+2.922	22 31 44.508
Oct. 17	42 Pegasi ζ	3	5	22 33 29.47	+3.357	22 33 26.11
19		3	5	29.29	.339	25.95
Dec. 5		4	5	28.79	2.813	25.98
9		3.4	5	28.86	.769	26.09
12		3.4	2	28.86	.739	26.12
Means		3.4				22 33 26.051
Aug. 25	44 Pegasi η	3	5	22 35 30.67	+3.207	22 35 27.463
Dec. 9	47 Pegasi λ	4.5	5	22 38 49.49	+2.545	22 38 46.945
June 30	48 Pegasi μ	4	5	22 42 16.59	+2.062	22 42 14.53
Dec. 5		4	5	16.98	.603	14.38
9		4	5	16.92	.552	14.37
Means		4				22 42 14.427
June 30	73 Aquarii λ	4	5	22 44 15.09	+2.461	22 44 12.63
Aug. 25		4	5	15.80	3.688	12.11
Oct. 19		4	5	16.48	.698	12.78
Dec. 12		4	5	15.83	.120	12.71
Means		4				22 44 12.557
June 30	24 Piscis Aus. α	1	5	22 48 47.73	+2.862	22 48 44.87
Aug. 25		1	5	48.59	4.250	44.34
Oct. 17		1	5	48.62	.280	44.34
Nov. 16		1	5	48.54	3.897	44.64
Dec. 5		1	5	48.00	.628	44.37
9		1	5	47.89	.576	44.31
12		1	5	48.02	.537	44.48
13		1	5	47.72	.525	44.20
Means		1				22 48 44.444

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.			Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1839.
						h. m. s.	s.	h. m. s.
Dec. 5	81	Aquarii		6.7	5	22 53 04.31	+3.232	22 53 01.08
9				6.7	5	04.36	.189	01.17
Means				6.7				22 53 01.125
June 30	53	Pegasi	β	2	5	22 56 01.11	+1.958	22 55 59.152
Oct. 17	54	Pegasi	α	2	5	22 56 48.16	+3.413	22 56 44.75
Nov. 16				2	5	47.61	.118	44.49
Dec. 5				2	5	47.70	2.901	44.80
9				2	5	47.60	.855	44.75
Means				2				22 56 44.696
Dec. 9	88	Aquarii	c^2	5	5	23 00 54.51	+3.459	23 00 51.05
13				5	5	54.11	.413	50.70
Means				5				23 00 50.875
Nov. 16	89	Aquarii	c^3	5	5	23 01 22.30	+3.774	23 01 18.526
Sept. 22	90	Aquarii	φ	5	5	23 06 02.94	+3.820	23 05 59.12
Nov. 16				5	4	02.24	.490	58.75
Dec. 9				5	5	02.02	.242	58.78
13				5.6	5	01.36	.200	58.16
Means				5				23 05 58.702
Nov. 16	62	Pegasi	τ	6	5	23 12 43.32	+3.114	23 12 40.21
Dec. 9				6	5	43.65	2.832	40.82
13				6	5	43.24	.775	40.46
Means				6				23 12 40.496
Nov. 16	8	Piscium	κ^1	6	5	23 18 44.46	+3.446	23 18 41.02
Dec. 9				6	5	43.90	.208	40.69
13				6.7	5	43.65	.167	40.48
Means				6				23 18 40.730
Nov. 16	101	Aquarii	b^4	6	5	23 24 54.62	+3.830	23 24 50.79
Dec. 13				5.6	5	53.59	.509	50.08
Means				6				23 24 50.435
Aug. 25	75	Pegasi	s	6	5	23 29 52.51	+3.295	23 29 49.215
Nov. 16	17	Piscium	ι	5	5	23 31 43.66	+3.460	23 31 40.200
Oct. 19	18	Piscium	λ	5	3	23 33 53.95	+3.713	23 33 50.24
20				5	5	53.63	.710	49.92
Dec. 13				5.6	5	52.96	.373	49.59
Means				5				23 33 49.917

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1839.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1839.
				h. m. s.	*s.*	*h. m. s.*
Nov. 16	78 Pegasi *i*	5.6	5	23 35 57.25	+3.244	23 35 54.006
Dec. 13	20 Piscium *n*	6	5	23 39 42.97	+3.343	23 39 39.627
Oct. 20	Ap. Sculp. δ	5	5	23 40 36.24	+4.286	23 40 31.95
Nov. 16		5	5	36.01	.032	31.98
Means		5				23 40 31.966
Aug. 25	81 Pegasi φ	6	3	23 44 21.19	+3.569	23 44 17.62
Nov. 16		6	5	21.72	.353	18.37
Dec. 13		6	5	21.36	.117	18.24
Means		6				23 44 18.077
Aug. 25	84 Pegasi ψ	5.6	5	23 49 36.83	+3.233	23 49 33.60
Oct. 20		5.6	5	37.54	.478	34.05
Means		5.6				23 49 33.825
Nov. 16	28 Piscium ω	4.5	5	23 51 06.50	+3.555	23 51 02.95
17		4.5	5	06.25	.546	02.70
Dec. 13		4.5	5	05.84	.301	02.54
Means		4.5				23 51 02.730
Aug. 25	29 Piscium *q*	5.6	5	23 53 37.56	+3.457	23 53 34.113
Nov. 16	2 Ceti *g*	5	5	23 55 33.10	+3.873	23 55 29.13
Dec. 13		5	5	32.45	.586	28.86
Means		5				23 55 28.995

APPARENT RIGHT ASCENSION

OF THE

MOON'S OBSERVED LIMB.

Date.		Limb observed.	Right ascension. h.	m.	s.
Jan.	23	I	3	18	00.63
	24	I	4	19	04.56
	26	I	6	26	11.43
	30	II	10	11	10.15
Feb.	2	II	12	24	39.42
	3	II	13	08	01.26
	4	II	18	52	43.96
	6	II	15.	30	26.51
	19	I	2	59	42.60
	21	I	5	03	09.36
March	1	II	12	07	58.74
	3	II	13	35	17.66
	4	II	14	21	16.34
	5	II	15	10	03.11
	24	I	8	44	21.24
	25	I	9	35	21.03
	26	I	10	22	47.83
	27	I	11	07	40.90
	30	II	13	19	51.43
	31	II	14	05	08.82
April	4	II	17	34	51.40
	5	II	18	33	46.69
	19	I	7	28	34.93
	20	I	8	26	26.34
	21	I	9	19	19.61
	22	I	10	07	58.83
	23	I	10	53	31.30
	25	I	12	20	04.54
	26	I	13	03	19.90
	27	I	13	47	58.26
May	3	II	19	13	11.39
	4	II	20	10	54.74
	19	I	9	50	24.94
	20	I	10	37	36.71
	22	I	12	05	20.11
	24	I	13	32	32.01
June	20	I	13	15	48.74
	22	I	14	49	09.54
	23	I	15	40	26.37
	25	I	17	33	05.10
	28	II	20	31	51.72
June	29	II	21	26	57.19
	30	II	22	19	38.15
July	21	I	16	12	32.68
	23	I	18	08	23.36
	25	I	20	07	35.46
Aug.	18	I	16	44	30.62
	19	I	17	42	11.17
	23	I	21	35	36.81
	24	II	22	32	07.55
	25	II	23	25	01.59
	31	II	5	14	22.91
Sept.	18	I	20	10	44.08
	19	I	21	08	14.86
	20	I	22	03	08.73
	22	I	28	50	21.25
	26	II	3	47	08.74
	28	II	5	59	35.71
Oct.	16	I	20	42	24.51
	17	I	21	36	28.12
	19	I	23	22	02.84
	20	I	0	15	35.20
	22	II	2	18	08.50
	23	II	3	16	46.85
	25	II	5	33	13.21
	26	II	6	40	50.53
	28	II	8	42	28.51
Nov.	16	I	23	48	19.67
	17	I	0	41	21.52
	18	I	1	37	44.12
	19	I	2	38	44.00
	20	I	3	44	48.45
	20	II	3	47	23.54
	21	II	4	57	25.90
	22	II	6	08	17.81
Dec.	12	I	22	38	43.57
	13	I	23	27	59.60
	19	I	5	27	00.62
	20	II	6	40	14.71
	25	II	11	21	17.76

RIGHT ASCENSION OF THE CENTRE OF MARS.

Date.		Limb observed.	Sidereal time of sem. passing.	Right ascension.			Diff. from N. A.
			s.	*h.*	*m.*	*s.*	*s.*
February	2	Centre		12	06	28.38	+0.62
March	27	I	0.43	11	10	47.57	—0.25

RIGHT ASCENSION OF THE CENTRE OF JUPITER.

Date.		Limb observed.	Sidereal time of sem. passing.	Right ascension.			Diff. from N. A.
			s.	*h.*	*m.*	*s.*	*s.*
February	2	I	1.34	13	11	16.96	+1.69
April	26	I	1.47	12	43	07.69	—0.44
	27	I	1.47	12	42	43.79	+0.23
May	14	I	1.42	12	37	18.41	+0.64

OCCULTATIONS OF STARS BY THE MOON.

Date.		Star.		Mag.	Mean time of observation.			Phase.	Power, tel.	Remarks.
1839.					*h.*	*m.*	*s.*			
June	20	*i*	Virginis	5	8	46	28.8	Im.	47	
	23	*b*	Scorpii	5	8	39	53.9	Im.	"	
July	6	*c*	Pleiadum	5	16	05	49.1	Im.	"	
	6	*c*	Pleiadum	5	16	33	41.1	Em.	"	
	6	*b*	Pleiadum	4.5	16	14	07.1	Em.	"	
	6	η	Tauri	3	16	20	17.4	Im.	"	
Sept.	26	*b*	Pleiadum	4.5	10	22	52.6	Em.	"	
	26	*g*	Pleiadum	5.6	10	30	20.2	Em.	"	
	26	*e*	Pleiadum	5	9	57	40.7	Im.	"	
	26	*e*	Pleiadum	5	10	39	59.3	Em.	"	
	26	*c*	Pleiadum	5	9	59	56.2	Im.	"	
	26	*c*	Pleiadum	5	10	56	42.4	Em.	"	
Oct.	17	δ	Capricorni	3.4	8	18	19.1	Im.	"	
	28	γ	Cancri	5	14	08	30.1	Em.	"	
Nov.	19	ι	Arietis	5	15	29	20.8	Im.	"	
	20	*b*	Pleiadum	4.5	6	10	55.0	Im.	"	
	20	*c*	Pleiadum	5	7	30	36.1	Em.	"	
	20	η	Tauri	3	7	13	18.8	Im.	"	
	20	η	Tauri	3	7	51	52.3	Em.	"	
Dec.	12		Aquarii	7	8	51	03.7	Im.	"	
	12	λ	Aquarii	4	9	14	13.3	Em.	"	
	12	78	Aquarii	6	9	25	19.9	Im.	"	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1839.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
1	21 Andromedæ	α	1	4	+28°12′	0 00 04.742	+3.071	+ .549	+ .094
2	88 Pegasi	γ	2.3	3	+14 17	0 04 57.137	+3.078	+ .102	— .098
3	41 Piscium	d	5.6	2	+ 7 18	0 12 19.015	+3.077	— .358	
4	31 Andromedæ	δ	3	2	+29 59	0 30 44.075	+3.169	+ .574	
5	16 Ceti	β	2.3	3	—18 52	0 35 30.310	+3.000	+ .098	— .031
6	63 Piscium	δ	5	2	+ 6 43	0 40 20.015	+3.095	+ .050	
7	67 Piscium	k	6.7	3	+26 20	0 47 19.277	+3.202	— .111	
8	App. Sculp.	α	5	2	—30 13	0 50 50.880	+3.898	+ .238	
9	71 Piscium	ε	4.5	2	+ 7 02	0 54 35.510	+3.106	— .234	
10	31 Ceti	η	3.4	1	—11 02	1 00 29.761	+3.000	+ .131	
11	85 Piscium	φ	6	1	+23 44	1 05 00.998	+3.231	— .031	
12	91 Piscium	l	6	1	+27 54	1 12 13.864	+3.285	— .301	
13	45 Ceti	θ^1	3	1	— 9 01	1 15 58.798	+3.001	+ .257	— .014
14	99 Piscium	η	4	3	+14 31	1 22 52.550	+3.189	— .041	
15	49 Ceti		5.6	2	—16 30	1 26 46.370	+2.922	+1.192	
16	102 Piscium	π	6	1	+11 19	1 28 34.071	+3.168	— .001	
17	105 Piscium		6	1	+15 36	1 31 00.035	+3.211	— .114	
18	52 Ceti	τ	3.4	1	—16 47	1 36 35.364	+2.779	+ .273	
19	110 Piscium	ο	5	1	+ 8 21	1 36 53.613	+3.148	— .119	
20	53 Ceti	χ^2	5	2	—11 29	1 41 40.875	+2.952	+ .807	
21	2 Trianguli	α	3.4	1	+28 48	1 43 55.101	+3.388	+ .159	
22	6 Arietis	β	3	3	+20 02	1 45 45.597	+3.283	+ .850	
23	59 Ceti	υ^2	4.5	4	—21 51	1 52 25.082	+2.816	+ .378	
24	13 Arietis	α	3	4	+22 42	1 58 06.732	+3.346	+ .534	+ .186
25	6 Trianguli	ι	6	3	+29 34	2 03 02.880	+3.453	+ .183	
26	22 Arietis	θ^1	6	3	+19 10	2 09 11.047	+3.315	+ .452	
27	Fornacis	χ	6	1	—24 32	2 15 11.052	+2.729	+1.531	
28	12 Trianguli	c	6	1	+28 57	2 18 44.950	+3.487	+ .387	
29	78 Ceti	ν	5	2	+ 4 54	2 27 25.780	+3.136	+ .396	
30	82 Ceti	δ	4	2	— 0 22	2 31 14.114	+3.062	— .094	
31	86 Ceti	γ	3.4	4	+ 2 33	2 34 57.838	+3.108	+ .122	— .271
32	42 Arietis	π	5	2	+16 47	2 40 19.285	+3.326	+ .971	
33	2 Eridani	τ^2	4.5	2	—21 40	2 43 44.295	+2.720	+ .235	
34	45 Arietis	ρ^2	6	1	+17 31	2 46 46.460	+3.350	+ .660	
35	48 Arietis	ε	5	6	+20 42	2 50 01.171	+3.408	+ .339	
36	92 Ceti	α	2.3	4	+ 3 27	2 53 52.182	+3.126	+ .175	— .037
37	11 Eridani	E	4	1	—24 16	2 55 17.867	+2.651	+ .158	
38	57 Arietis	δ	4	5	+19 07	3 02 26.048	+3.398	+ .236	
39	12 Eridani		4	1	—29 37	3 05 14.355	+2.561	— .164	
40	13 Eridani	ζ	4.5	1	— 9 25	3 08 01.297	+2.906	+ .473	
41	95 Ceti	k^2	6	1	— 1 31	3 10 08.646	+3.041	+ .187	
42	16 Eridani		3.4	1	—22 21	3 12 21.471	+2.659	+ .350	
43	64 Arietis	g	5.6	2	+24 09	3 14 48.985	+3.517	+ .322	
44	5 Tauri	f	5.6	2	+12 23	3 21 59.810	+3.293	+ .583	
45	18 Eridani	ε	4	3	—10 00	3 25 20.810	+2.884	— .596	
46	19 Eridani	t^2	4.5	1	—22 11	3 26 40.690	+2.641	+ .231	
47	10 Tauri	E	5	1	— 0 07	3 28 39.459	+3.065	— .386	
48	Eridani	y	5	1	—40 49	3 31 19.437	+2.149	+ .186	
49	17 (Pleiadum)	b	4.5	4	+23 36	3 35 19.595	+3.538	+ .243	
50	23 Eridani	δ	3.4	1	—10 19	3 35 32.400	+2.871	— .149	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1839.

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									A. S. C.	N. A.
							h. m. s.	*s.*	*s.*	*s.*
51	25	Tauri	η	3	7	+23 36	3 37 55.493	+3.546	+ .389	— .003
52	27	(Pleiadum)	*f*	5	2	+23 33	3 39 36.005	+3.543	+ .488	
53	44	Persei	ζ	3.4	3	+31 24	3 44 01.396	+3.742	+ .128	
54	34	Eridani	γ^1	2.3	6	—13 58	3 50 31.185	+2.789	+ .142	— .038
55	37	Tauri	A^1	5	6	+21 38	3 55 11.172	+3.520	+ .410	
56	42	Tauri	ψ	6	1	+28 34	3 57 04.037	+3.692	+ .269	
57	43	Tauri	ω^1	6.7	2	+19 11	3 59 47.755	+3.469	+ .184	
58	38	Eridani	ο	4.5	2	— 7 16	4 04 00.225	+2.919	+ .194	
59	49	Tauri	μ	5.6	2	+ 8 29	4 06 47.785	+3.243	+ .208	
60	54	Tauri	γ	3	2	+15 14	4 10 37.906	+3.390	— .054	
61	41	Eridani	X	3.4	3	—34 11	4 11 48.527	+2.259	+1.086	
62	64	Tauri	δ^2	4.5	1	+17 04	4 14 49.041	+3.435	— .114	
63	69	Tauri	υ^1	5	5	+22 26	4 16 40.792	+3.564	+ .576	
64	74	Tauri	ε	4	1	+18 49	4 19 12.899	+3.479	— .082	
65	87	Tauri	α	1	4	+16 11	4 26 41.185	+3.426	+ .288	— .160
66	94	Tauri	τ	5	4	+22 39	4 32 35.105	+3.584	— .051	
67	57	Eridani	μ	5	3	— 3 33	4 37 27.240	+2.990	+ .260	
68	1	Orionis	*q*	4	2	+ 6 40	4 41 05.934	+3.251	— .615	
69	3	Orionis	*r*	4	3	+ 5 19	4 42 38.093	+3.185	— .322	
70	8	Orionis	*z*	4.5	2	+ 2 10	4 45 51.780	+3.116	+ .426	
71	9	Orionis	o^2	5	1	+13 15	4 47 19.385	+3.367	+ .352	
72	10	Orionis	*s*	5.6	1	+ 1 28	4 50 12.428	+3.100	+ .098	
73	63	Eridani		6	1	—10 30	4 52 13.478	+2.831	— .191	
74	102	Tauri	ι	4.5	4	+21 21	4 53 28.405	+3.568	+ .133	
75	2	Leporis	ε	4	3	—22 35	4 58 38.820	+2.532	+ .692	
76	67	Eridani	β	3	1	— 5 18	4 59 56.145	+2.948	— .067	
77	69	Eridani	λ	4.5	1	— 8 58	5 01 26.712	+2.864	+ .256	
78	3	Leporis	ι	5	1	—12 04	5 04 47.200	+2.791	+ .161	
79	19	Orionis	β	1	6	— 8 24	5 06 48.220	+2.878	+ .206	+ .006
80		Columbæ	ο	5	2	—35 03	5 11 41.025	+2.851	+ .646	
81	6	Leporis	λ	4.5	2	—13 21	5 12 09.515	+2.758	+ .313	
82	112	Tauri	β	2	9	+28 28	5 16 07.227	+3.782	+ .246	+ .052
83	9	Leporis	β	4	1	—20 54	5 21 21.031	+2.565	+ .116	
84	31	Orionis	*t*	5.6	1	— 1 13	5 21 33.291	+3.040	+ .581	
85	34	Orionis	δ	2	3	— 0 25	5 23 47.020	+3.060	+ .070	— .093
86	11	Leporis	α	3.4	2	—17 57	5 25 37.951	+2.642	+ .261	+ .022
87	26	Aurigæ	*l*	6	5	+30 23	5 28 18.000	+3.884	+ .244	
88	48	Orionis	σ	4.5	1	— 2 42	5 30 39.799	+3.005	+ .194	
89		Columbæ	α	2	6	—34 10	5 33 49.572	+2.169	+ .589	+ .123
90	13	Leporis	γ	4	2	—22 30	5 37 45.140	+2.517	+ .097	
91	132	Tauri	B	5.6	1	+24 30	5 39 08.210	+3.674	+ .624	
92	136	Tauri	C	5	7	+27 34	5 43 12.602	+3.763	+ .255	
93	58	Orionis	α	1	5	+ 7 22	5 46 27.526	+3.243	+ .177	+ .060
94	139	Tauri		5.6	2	+25 56	5 48 00.329	+3.717	+ .186	
95	16	Leporis	η	4	1	—14 12	5 49 04.121	+2.730	— .049	
96		Columbæ	γ	4	5	—35 18	5 51 49.828	+2.122	+ .170	
97	66	Orionis	C	6	1	+ 4 10	5 56 27.844	+3.165	+ .159	
98	67	Orionis	ν	5	4	+14 47	5 58 22.745	+3.421	+ .396	
99	19	Leporis	τ	6	1	—19 09	6 00 41.496	+2.604	+ .500	
100		Columbæ	θ	5	1	—37 14	6 02 00.771	+2.053	+ .724	

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					h. m. s.	s.	s.	s.
101	44 Aurigæ κ	4	7	+29°33′	6 05 07.277	+3.825	+ .842	
102	75 Orionis l	6.7	1	+10 00	6 08 14.012	+3.303	— .355	
103	Columbæ κ	4.5	1	—35 05	6 10 50.223	+2.130	+ .753	
104	13 Geminorum μ	3	4	+22 35	6 13 13 227	+3.625	+ .430	+ .036
105	3 Canis Maj. λ	4	2	—33 22	6 16 13.809	+2.191	+ .180	
106	18 Geminorum ν	5	1	+20 18	6 19 24.228	+3.561	+ .539	
107	Canis Maj. D¹		1	—32 29	6 22 12.694	+2.221	+ .475	
108	13 Monocerotis f	5.6	1	+ 7 27	6 24 11.923	+3.242	— .815	
109	24 Geminorum γ	3	4	+16 32	6 28 24.535	+3.462	+ .367	
110	27 Geminorum ε	3	3	+25 17	6 34 01.475	+3.693	+ .260	
111	31 Geminorum ξ²	4.5	1	+13 04	6 36 15.035	+3.375	— .160	
112	9 Canis Maj. α	1	5	—16 30	6 38 03.188	+2.646	+ .131	+ .076
113	16 Canis Maj. o¹	4.5	1	—23 59	6 47 26.989	+2.486	— .065	
114	21 Canis Maj. ε	2.3	3	—28 45	6 52 18.023	+2.355	+ .257	+ .007
115	23 Canis Maj. γ	4	1	—15 24	6 56 28.353	+2.711	+ .164	
116	46 Geminorum τ	5	2	+30 30	7 00 53.410	+3.829	+ .589	
117	53 Geminorum z	6.7	1	+28 10	7 05 53.306	+3.755	+ .291	
118	55 Geminorum δ	3.4	1	+22 16	7 10 30.230	+3.592	+ .280	— .003
119	10 Canis Min. α	1.2	1	+ 5 38	7 30 52.026	+3.145	— .111	— .358
120	78 Geminorum β	2	2	+28 25	7 35 27.403	+3.684	+ .485	— .033
121	6 Cancri	5.6	2	+28 14	7 53 37.035	+3.701	+ .236	
122	Argus ζ	3	1	—39 33	7 57 55.713	+2.108	+ .221	
123	15 Argus	3.4	3	—23 51	8 00 41.503	+2.559	+ .661	+ .078
124	20 Argus	6.7	1	—15 18	8 05 55.744	+2.756	+ .020	
125	17 Cancri β	4	1	+ 9 40	8 07 46.472	+3.262	+ .074	
126	19 Cancri λ	5.6	2	+24 31	8 10 57.020	+3.582	+ .212	
127	31 Cancri θ	5.6	2	+18 38	8 22 25.415	+3.436	+1.521	
128	43 Cancri γ	5	2	+22 03	8 33 57.235	+3.493	— .042	
129	47 Cancri δ	4.5	2	+18 45	8 35 31.210	+3.422	— .100	
130	11 Hydræ ε	4	2	+ 7 00	8 38 14.644	+3.197	+ .029	— .293
131	16 Hydræ ζ	4	3	+ 6 33	8 46 52.680	+3.183	— .577	
132	77 Cancri ξ	5.6	3	+22 42	9 00 05.487	+3.465	+ .092	
133	22 Hydræ θ	4.5	2	+ 2 59	9 05 58.825	+3.117	+ .028	
134	83 Cancri q	6	2	+18 23	9 09 58.888	+3.369	— .173	
135	30 Hydræ α	2	2	— 7 58	9 19 40 643	+2.950	+ .421	+ .023
136	4 Leonis λ	4.5	3	+23 40	9 22 31.417	+3.441	+ .038	
137	16 Leonis ψ	6	1	+14 45	9 34 57.203	+3.277	— .020	
138	17 Leonis ε	3	2	+24 31	9 36 42.314	+3.427	+ .600	+ .142
139	24 Leonis μ	3	4	+26 46	9 43 35.907	+3.448	+ .750	
140	27 Leonis ν	5.6	2	+13 13	9 49 33.195	+3.238	+ .093	
141	30 Leonis η	3.4	2	+17 33	9 58 32.937	+3.283	+ .440	
142	32 Leonis α	1	1	+12 45	9 59 47.794	+3.222	+ .515	+ .083
143	41 Hydræ λ²	4.5	2	—11 33	10 02 44.594	+2.934	+ .458	
144	36 Leonis ζ	4.5	3	+24 13	10 07 43.807	+3.353	+ .670	
145	41 Leonis γ	2	5	+20 39	10 11 05.278	+3.300	+ .568	
146	42 Hydræ μ	4	4	—16 01	10 18 18.465	+2.903	+ .488	
147	47 Leonis ρ	4	6	+10 08	10 24 19.657	+3.166	+ .023	
148	42 Leonis Min. n	4.5	1	+31 32	10 36 54.017	+3.361	+ .848	
149	53 Leonis l	6	2	+11 24	10 40 47.301	+3.160	+ .111	
150	4 Hyd. & Crat. ν	4	4	—15 21	10 41 41.243	+2.945	+ .638	

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					h. m. s.	s.	s.	s.
151	54 Leonis	4.5	5	+25°37′	10 46 53.000	+3.271	—0.065	
152	7 Hyd. & Crat. α	4	6	—17 26	10 51 56.010	+2.905	+0.445	
153	63 Leonis χ	4.5	8	+ 8 13	10 56 42.254	+3.086	+0.230	
154	11 Hyd. & Crat. β	4	1	—21 56	11 03 45.126	+2.937	+0.083	
155	68 Leonis δ	3	6	+21 24	11 05 32.160	+3.194	+0.213	+0.020
156	12 Hyd. & Crat. δ	3.4	5	—13 51	11 11 17.786	+3.000	+0.074	—0.037
157	77 Leonis σ	4	1	+ 6 55	11 12 49.726	+3.102	+0.038	
158	15 Hyd. & Crat. γ	4	3	—16 48	11 16 50.610	+2.992	+0.402	
159	84 Leonis τ	4	4	+ 3 45	11 19 39.247	+3.084	+0.171	
160	19 Hyd. & Crat. ξ	4	4	—30 58	11 25 06.397	+2.945	+1.122	
161	91 Leonis υ	4.5	5	+ 0 04	11 28 42.314	+3.068	+0.192	
162	27 Hyd. & Crat. ζ	4	4	—17 27	11 36 36.605	+3.025	+0.450	
163	94 Leonis β	2.3	1	+15 28	11 40 50.669	+3.066	+0.323	+0.063
164	5 Virginis β	3.4	4	+ 2 40	11 42 18.407	+3.124	+0.111	
165	28 Hyd. & Crat. β	4	1	—33 01	11 44 47.838	+3.009	+0.367	
166	7 Virginis b	5.6	2	+ 4 33	11 51 41.775	+3.072	—0.213	
167	9 Virginis o	4.5	4	+ 9 37	11 57 00.405	+3.071	+0.056	
168	1 Corvi α	4.5	3	—23 50	12 00 07.677	+3.067	+0.554	
169	2 Corvi ε	4	2	—21 43	12 01 51.355	+3.071	+0.216	
170	4 Corvi γ	3	2	—16 39	12 07 32.025	+3.080	+0.095	
171	15 Virginis η	3.4	4	+ 0 14	12 11 40.372	+3.068	+0.130	
172	16 Comæ Ber. α	4.5	4	+27 43	12 18 55.720	+3.011	+0.511	
173	21 Virginis q	5.6	2	— 8 34	12 25 28.215	+3.090	—0.205	
174	9 Corvi β	2.3	8	—22 30	12 25 56.655	+3.133	+0.704	+0.085
175	29 Virginis γ^1	4	10	— 0 34	12 33 30.521	+3.022	+0.533	
176	Centauri p	6	1	—33 0-	12 41 57.806	+3.226		
177	40 Virginis ψ	5.6	4	— 8 40	12 45 59.284	+3.108	+0.018	
178	43 Virginis δ	3.4	6	+ 4 16	12 47 29.783	+3.004	+0.377	
179	36 Comæ Ber. r	4.5	7	+18 16	12 50 57.929	+2.971	+0.830	
180	47 Virginis ε	3.4	7	+11 49	12 54 09.976	+3.003	+0.179	
181	41 Comæ Ber. u	4.5	1	+28 29	12 59 27.460	+2.883	+1.113	
182	1 Hydræ con. ψ	4.5	2	—22 15	13 00 23.795	+3.209	+0.434	
183	51 Virginis θ	4.5	6	— 4 40	13 01 37.130	+3.097	—0.094	
184	42 Comæ Ber. υ	4.5	1	+18 23	13 02 09.719	+2.950	+0.669	
185	2 Hydræ con. γ	4.5	5	—22 19	13 10 10.873	+3.232	+0.105	
186	67 Virginis α	1	10	—10 19	13 16 43.283	+3.150	+0.250	+0.075
187	Centauri d	4	5	—38 34	13 21 43.950	+3.437	—0.158	
188	79 Virginis ζ	4	11	+ 0 14	13 26 29.677	+3.066	—0.177	
189	82 Virginis m	5.6	4	— 7 53	13 33 10.022	+3.140	—0.048	
190	Centauri i	5	1	—32 13	13 36 33.586	+3.410		
191	86 Virginis O	6	5	—11 37	13 37 22.005	+3.180	+0.175	
192	89 Virginis x	5.6	4	—17 20	13 41 08.026	+3.245	+0.121	
193	3 Centauri k	4.5	11	—32 11	13 42 33.705	+3.430	—0.505	
194	8 Bootis η	3	16	+19 13	13 47 01.215	+2.860	+0.304	—0.071
195	93 Virginis τ	4.5	12	+ 2 20	13 53 27.572	+3.042	+0.204	
196	5 Hydræ con. π	4.5	9	—25 54	13 57 13.401	+3.384	+0.305	
197	5 Centauri θ	2	5	—35 34	13 57 14.340	+3.491	—0.169	
198	98 Virginis κ	4	12	— 9 31	14 04 19.005	+3.183	+0.205	
199	16 Bootis α	1	3	+20 01	14 08 19.212	+2.733	+0.348	—0.020
200	100 Virginis λ	4	3	—12 37	14 10 24.623	+3.228	+0.311	

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					h. m. s.	s.	s.	s.
201	Centauri α		1	—38°46′	14 13 08.982	+3.656		
202	8 Hydræ con.	5.6	2	—28 46	14 18 46.015	+3.483	+ .158	
203	25 Bootis ρ	4	5	+31 05	14 24 53.570	+2.592	+ .132	
204	Lupi α	3	3	—46 41	14 31 16.607	+3.933	+ .430	
205	29 Bootis π	3.4	3	+17 07	14 33 09.860	+2.813	— .067	
206	36 Bootis ε	3	6	+27 45	14 37 57.343	+2.623	+ .474	— .033
207	9 Libræ α^2	3	9	—15 22	14 41 59.030	+3.309	— .015	— .105
208	1690 A. S. C.	6	4	—20 40	14 48 05.110	+3.404	+2.324	
209	Centauri χ	3	2	—41 27	14 48 43.475	+3.857	+ .352	
210	20 Libræ	3.4	10	—24 39	14 54 39.999	+3.490	+ .439	
211	24 Libræ ι^1	5.6	4	—19 11	15 03 03.910	+3.400	+ .370	
212	3 Corona Bor. β	4	6	+29 39	15 21 11.540	+2.483	— .067	
213	38 Libræ γ	4.5	1	—14 15	15 26 31.680	+3.333	— .227	
214	5 Corona Bor. α	2	6	+27 16	15 27 52.359	+2.528	+ .524	+ .020
215	42 Libræ χ	5.6	1	—23 17	15 30 46.394	+3.524	+ .098	
216	Lupi h	6	4	—36 54	15 32 12.956	+3.870		
217	44 Libræ η	4.5	1	—15 09	15 35 01.898	+3.359	+ .557	
218	32 Serpentis μ	3.4	3	— 2 56	15 41 13.253	+3.124	— .223	
219	1 Scorpii b	5	2	—25 15	15 41 18.736	+3.585	+ .651	
220	5 Scorpii ρ	4	3	—28 44	15 46 57.665	+3.679	+ .254	
221	6 Scorpii π	3.4	1	—25 39	15 49 08.289	+3.606	+ .805	
222	7 Scorpii δ	3	4	—22 09	15 50 49.512	+3.527	— .031	
223	8 Scorpii β^1	2	4	—19 21	15 56 05.030	+3.473	— .181	— .182
224	Scorpii ν^2	6	2	—19 02	16 02 37.675	+3.468		
225	14 Scorpii ν^1	4	6	—19 02	16 02 38.737	+3.469	— .284	
226	1 Ophiuchi δ	3	2	— 3 16	16 05 54.701	+3.137	+ .147	— .194
227	20 Scorpii σ	4	6	—25 12	16 11 24.847	+3.626	+ .153	
228	20 Herculis γ	3.4	7	+19 32	16 14 49.017	+2.643	+ .080	
229	21 Scorpii α	1	10	—26 04	16 19 32.828	+3.663	— .151	± .000
230	27 Herculis β	3	8	+21 51	16 23 17.864	+2.579	+ .393	
231	23 Scorpii τ	3.4	1	—27 53	16 25 52.262	+3.715	— .053	
232	13 Ophiuchi ζ	3.4	6	—10 14	16 28 17.700	+3.290	— .200	
233	26 Scorpii ε	3	9	—34 00	16 39 45.177	+3.870	+ .257	
234	25 Ophiuchi ι	5	4	+10 26	16 46 23.187	+2.834	— .239	
235	27 Ophiuchi κ	4	5	+ 9 38	16 50 02.776	+2.852	— .232	
236	58 Herculis ε	3	7	+31 10	16 54 07.821	+2.293	+ .364	
237	Scorpii η	3	6	—43 01	17 00 38.548	+4.272	+ .670	
238	35 Ophiuchi η	3	3	—15 31	17 01 08.840	+3.426	— .124	
239	36 Ophiuchi A	4.5	6	—26 21	17 05 27.505	+3.671	— .154	
240	64 Herculis α	3.4	1	+14 35	17 07 18.243	+2.732	+ .118	— .321
241	65 Herculis δ	3.4	3	+25 02	17 08 25.060	+2.460	+ .780	
242	40 Ophiuchi ρ	4.5	1	—20 56	17 11 21.466	+3.567	+ .448	
243	42 Ophiuchi θ	3.4	6	—24 50	17 12 07.733	+3.672	+ .145	
244	45 Ophiuchi d	5	6	—29 43	17 17 05.018	+3.817	— .195	
245	35 Scorpii λ	2.3	3	—36 59	17 22 41.520	+4.060	+ .330	
246	76 Herculis λ	4.5	5	+26 14	17 24 13.822	+2.417	+ .031	
247	Scorpii κ	3	1	—38 56	17 31 22.003	+4.139	+ .712	
248	60 Ophiuchi β	3	1	+ 4 38	17 35 31.402	+2.960	+ .518	
249	3 Sagittarii p	5.6	2	—27 46	17 37 25.930	+3.768	+ .641	
250	86 Herculis μ	4	2	+27 49	17 40 09 765	+2.366	+ .631	

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							A. S. C.	N. A.
					h. m. s.	*s.*	*s.*	*s.*
251	89 Herculis	5.6	1	+26°05′	17 48 55.543	+2.415	+ .018	
252	64 Ophiuchi ν	4	2	— 9 45	17 50 10.480	+3.297	+ .837	
253	92 Herculis ξ	4	2	+29 16	17 51 30.633	+2.320	+ .473	
254	10 Sagittarii γ^2	4	5	—30 25	17 55 28.452	+3.852	+ .094	
255	72 Ophiuchi S^2	4	2	+ 9 33	17 59 42.715	+2.843	— .032	
256	103 Herculis ο	4	3	+28 45	18 01 15.730	+2.335	+ .145	
257	13 Sagittarii μ^1	3.4	4	—21 06	18 04 08.178	+3.586	+ .293	— .136
258	19 Sagittarii δ	3.4	5	—29 53	18 10 41.452	+3.835	+ .507	
259	107 Herculis *t*	6	1	+28 48	18 14 44.712	+2.335	+ .787	
260	22 Sagittarii λ	4	3	—25 30	18 18 02.207	+3.704	+ 151	
261	Cor. Aust. λ	6	1	—38 3-	18 32 44.137	+4.121		
262	27 Sagittarii φ	4.5	4	—27 09	18 35 35.907	+3.745	— .198	
263	34 Sagittarii σ	3	3	—26 29	18 45 16.838	+3.722	+ .050	
264	40 Sagittarii τ	4	1	—27 54	18 56 53.203	+3.755	+ .388	
265	41 Sagittarii π	4	2	—21 16	19 00 11.300	+3.571	+ .231	
266	30 Aquilæ δ	3.4	1	+ 2 48	19 17 22.622	+3.009	+ .239	— .067
267	6 Vulpeculæ *b*	4	4	+24 21	19 22 00.663	+2.502	+ .845	
268	52 Sagittarii h^2	4.5	3	—25 14	19 26 54.408	+3.654	+ .472	
269	12 Cygni φ	4	4	+29 47	19 33 01.415	+2.365	+ .290	
270	50 Aquilæ γ	3	7	+10 14	19 38 36.273	+2.851	+ .042	
271	57 Sagittarii	5.6	1	—19 27	19 42 50.238	+3.494	— .018	
272	53 Aquilæ α	1.2	6	+ 8 27	19 42 55.703	+2.925	+ .197	+ .013
273	59 Sagittarii *b*	5	1	—27 35	19 47 03.816	+3.693	+ .339	
274	60 Aquilæ β	3.4	6	+ 6 01	19 47 24.238	+2.945	+ .091	
275	62 Sagittarii *c*	4.5	4	—28 09	19 52 45.200	+3.700	+ .480	
276	65 Aquilæ θ	3 4	5	— 1 18	20 02 59.808	+3.095	+ .163	
277	5 Capricorni α^1	4	1	—13 00	20 08 43.037	+3.331	+ .047	
278	6 Capricorni α^2	3	1	—13 02	20 09 07.037	+3.332	+ .078	+ .024
279	7 Capricorni σ	5.6	1	—19 37	20 10 06.038	+3.471	+ .179	
280	10 Capricorni π	5	3	—18 44	20 18 06.047	+3.443	+ .150	
281	41 Cygni *i*	4.5	3	+29 50	20 22 49.527	+2.446	+ .573	
282	6 Delphini β	4	4	+14 02	20 29 59.905	+2.803	+ .378	
283	16 Capricorni ψ	4.5	6	—25 51	20 36 33.136	+3.572	— .452	
284	Microscopi α	4.5	2	—34 22	20 39 54.040	+3.771	+1.011	
285	6 Aquarii μ	4.5	1	— 9 35	20 43 57.706	+3.239	— .035	
286	32 Vulpeculæ *q*	5.6	2	+27 27	20 47 42.195	+2.552	+ .587	
287	Microscopi γ		2	—32 5—	20 51 24.415	+3.701		
288	22 Capricorni η	5	3	—20 29	20 55 14.163	+3.430	+ .083	
289	23 Capricorni θ	5.6	2	—17 52	20 56 53.302	+3.378	+ .300	
290	13 Aquarii ν	5	2	—12 01	21 00 49.135	+3.270	+ .605	
291	64 Cygni ζ	3	3	+29 34	21 06 05.365	+2.548	+ .722	+ .081
292	29 Capricorni *s*	4.5	2	—15 50	21 06 49.745	+3.329	— .236	
293	32 Capricorni ι	5	1	—17 31	21 13 16.544	+3.350	— .036	
294	1 Pegasi *e*	4	1	+19 07	21 14 38.672	+2.762	+ .424	
295	34 Capricorni ζ	4	2	—23 06	21 17 27.925	+3.441	+ .436	
296	22 Aquarii β	3	3	— 6 17	21 23 04.753	+3.163	+ .145	± .000
297	39 Capricorni ε	5	1	—20 11	21 28 03.676	+3.372	+ .288	
298	40 Capricorni γ	4	5	—17 23	21 31 09.838	+3.322	+ .320	
299	9 Piscis Aust. ι	4.5	1	—33 45	21 35 20.706	+3.598	+ .614	
300	8 Pegasi ε	2.3	1	+ 9 08	21 36 16.768	+2.944	+ .190	— .010

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1839.

No.	Star.		Mag	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
301	49 Capricorni	δ	3.4	6	—16°51′	21 38 08.867	+3.304	+ .291	
302	14 Pegasi		5	2	+29 26	21 42 43.850	+2.643	+ .343	
303	Gruis	γ	4	2	—38 07	21 44 09.750	+3.657	+ .897	
304	16 Pegasi	B	5.6	2	+25 10	21 45 44.605	+2.721	+ .416	
305	12 Piscis Aust.	η	6	2	+29 13	21 51 34.565	+3.467	+ .338	
306	33 Aquarii	ι	4.5	4	—14 39	21 57 44.350	+3.247	+ .137	
307	43 Aquarii	θ	4.5	2	— 8 35	22 08 19.951	+3.163	+ .204	
308	2656 A. S. C.		6	1	— 9 50	22 08 22.089	+3.177	— .064	
309	48 Aquarii	γ	4	1	— 2 12	22 13 20.512	+3.092	+ .364	
310	32 Pegasi	C	5.6	1	+27 31	22 13 54.053	+2.757	+ .810	
311	57 Aquarii	σ	5	2	—11 30	22 22 07.300	+3.182	— .080	
312	17 Piscis Aust.	β	4	1	—33 10	22 22 20.194	+3.431	— .065	
313	62 Aquarii	η	4	3	— 0 57	22 27 05.030	+3.077	+ .357	
314	18 Piscis Aust.		4	1	—27 53	22 31 44.508	+3.336	+ .274	
315	42 Pegasi	ζ	3.4	5	+ 9 59	22 33 26.051	+2.983	+ .273	+ .030
316	44 Pegasi	η	3	1	+29 23	22 35 27.463	+2.796	+ .019	
317	47 Pegasi	λ	4.5	1	+22 43	22 38 46.945	+2.873	— .392	
318	48 Pegasi	μ	4	3	+23 45	22 42 14.427	+2.872	+ .919	
319	73 Aquarii	λ	4	4	— 8 26	22 44 12.557	+3.133	+ .230	
320	24 Piscis Aust.	α	1	8	—30 28	22 48 44.444	+3.311	+ .305	+ .086
321	81 Aquarii		6.7	2	— 7 55	22 53 01.125	+3.122	— .083	
322	53 Pegasi	β	2	1	+27 13	22 55 59.152	+2.878	+ .880	
323	54 Pegasi	α	2	4	+14 20	22 56 44.696	+2.977	+ .211	— .077
324	88 Aquarii	c²	5	2	—22 03	23 00 50.875	+3.208	— .357	
325	89 Aquarii	c³	5	1	—23 20	23 01 18.526	+3.216	+ .182	
326	90 Aquarii	φ	5	4	— 6 55	23 05 58.702	+3.106	+ .018	
327	62 Pegasi	τ	6	3	+22 52	23 12 40.496	+2.952	+ .378	
328	8 Piscium	κ¹	6	3	+ 0 23	23 18 40.730	+3.067	+ .671	
329	101 Aquarii	b⁴	6	2	—21 48	23 24 50.435	+3.151	— .234	
330	75 Pegasi	s	6	1	+17 31	23 29 49.215	+3.012	+ .077	
331	17 Piscium	ι	5	1	+ 4 45	23 31 40.200	+3.057	+ .145	— .009
332	18 Piscium	λ	5	3	+ 0 54	23 33 49.917	+3.066	— .027	
333	78 Pegasi	i	5.6	1	+28 28	23 35 54.006	+2.991	— .413	
334	20 Piscium	n	6	1	— 3 39	23 39 39.627	+3.076	+ .163	
335	Ap. Sculp.	δ	5	2	—29 01	23 40 31.966	+3.133	+ .479	
336	81 Pegasi	φ	6	3	+18 14	23 44 18.077	+3.037	+ .404	
337	84 Pegasi	ψ	5.6	2	+24 15	23 49 33.825	+3.040	— .065	
338	28 Piscium	ω	4.5	3	+ 5 58	23 51 02.730	+3.062	— .048	
339	29 Piscium	q	5.6	1	— 3 55	23 53 34.113	+3.071	+ .504	
340	2 Ceti	g	5	2	—18 14	23 55 29.230	+3.078	— .032	

ASTRONOMICAL OBSERVATIONS AT WASHINGTON.

1840.

15

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 12	ε Piscium	4	+ 7°02′	42.2	6.9	0 54 30.7	54.5	19.2
2		η Ceti	3.4	—11 02	35.6	0.6	1 00 24.8	49.0	13.6
3		φ Piscium	6	+23 44	3.6	30.2	1 04 56.6	22.8	49.0
4		Ceti	6.7	— 5 —	33.0	57.5	1 08 21.0	44.7	9.5
*5		θ^1 Ceti	3	— 9 00	5.2	29.8	1 15 54.0	18.0	42.6
6		47 Ceti	7	—13 53	0.5	25.5	1 18 50.2	14.5	39.6
7		η Piscium	4	+14 31	58.2	23.5	1 22 48.0	12.5	37.6
8		49 Ceti	7	—16 30	50.9	16.2	1 26 41.0	6.0	31.2
9		τ Ceti	4	—16 47	40.2	5.9	1 36 30.5	55.2	20.8
10		χ^2 Ceti	6	—11 29	45.3	11.6	1 41 36.0	0.5	26.2
11		Moon I	(8.1)	+15 24	48.7	14.5	1 45 39.7	5.1	30.8
12		α Piscium	5	+ 1 59	50.5	15.0	1 53 39.0	2.8	27.0
13		α Arietis	3	+22 42	10.4	36.7	1 58 02.5	28.2	54.5
14		ι Trianguli	5.6	+29 33			2 02 58.7	26.0	54.0
15		ο Ceti	6.7	— 3 42	20.5	44.7	2 11 08.5	32.5	56.8
16	13	β Arietis	3	+20 01	49.0	14.6	1 45 40.1	5.5	31.2
17		υ^1 Ceti	6	—23 19	10.0	36.1	1 49 02.0	28.0	54.8
18		α Piscium	5	+ 1 59	49.6	14.1	1 53 37.8	1.5	26.0
19		α Arietis	3	+22 42	9.0	35.6	1 58 01.3	27.3	53.7
20		ι Trianguli	6	+29 33	2.2	30.5	2 02 57.7	25.0	53.0
21		ο Ceti	7	— 3 42	19.1	44.0	2 11 07.7	31.5	56.0
22		χ Fornacis	6.7	—34 32	12.0	38.6	2 15 04.8	31.0	58.0
23		ν Ceti	5	+ 4 53	32.0	56.8	2 27 20.8	44.6	9.0
24		ε Ceti	4.5	—12 34	52.0	17.0	2 31 41.2	5.7	30.8
25		γ Ceti	3	+ 2 34	4.5	29.0	2 34 52.6	16.4	41.0
26		ε Arietis	3	+26 36	32.6	0.0	2 40 26.5	53.0	20.2
27		Moon I	(9.1)	+20 54	25.0	51.8	2 43 18.1	44.0	10.6
28		ρ^2 Arietis	6	+17 40	51.0	16.6	2 46 41.6	6.6	32.0
29		ε Arietis	5	+20 43	4.6	30.8	2 49 56.2	21.6	47.8
*30		α Ceti	2.3	+ 3 28	58.8	23.3	2 53 47.2	11.0	35.3
31		53 Arietis	7	+17 15	27.0	52.5	2 58 17.5	42.5	8.0
32		δ Arietis	4	+19 07	30.5	56.2	3 02 21.3	46.5	12.1
33		12 Eridani	4	—29 37	13.5	41.5	3 05 08.8	36.1	4.0
34		k^2 Ceti	6	— 1 31	15.2	39.5	3 10 03.5	27.5	51.2
35		g Arietis	6	+24 09	51.4	18.2	3 14 44.0	10.0	37.0
36		α Tauri	1	+16 11	47.0	12.1	4 26 36.9	1.6	27.1
37	14	c Arietis	3	+26 36	32.0	59.0	2 40 25.8	52.6	19.5
38		ρ^2 Arietis	6	+17 40	50.2	15.7	2 46 40.5	5.3	30.8
39		ε Arietis	5	+20 42	4.0	30.2	2 49 55.5	20.7	47.0
40		α Ceti	2.3	+ 3 28	58.0	22.5	2 53 46.3	10.0	34.5
41		δ Arietis	4	+19 07	29.6	55 3	3 02 20.5	45.6	11.5
42	15	ω^1 Tauri	6.7	+19 11	50.9	16.6	3 59 41.8	6.5	32.5
43		ο Eridani	5.6	— 7 15	5.7	30.0	4 03 54.0	18.0	42.5
44		μ Tauri	5.6	+ 8 29	53.1	17.8	4 06 41.7	5.6	30.3
45		X Eridani	3.4	—34 11	43.2	12.7	4 11 41.5	10.1	39.5
46		υ^1 Tauri	5.6	+22 27	43.2	9.5	4 16 35.3	1.0	27.2
47		α Tauri	1	+16 11	45.5	10.8	4 26 35.5	0.8	25.6
48		53 Eridani	5	—14 37	51.3	16.4	4 30 41.5	6.5	31.5
49		μ Eridani	5	— 3 33	33.0	57.4	4 37 21.0	44.7	9.0
50		τ Orionis	4.5	+ 5 19	43.5	8.0	4 42 32.0	56.0	20.5

January 14. Observation interrupted by clouds.
15. Strong gale from NW.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
0	54	30.70	+ .425			—0	07.74	—1.20	0	54	38.86	1
1	00	24.72	+ .623				.74		1	00	33.08	2
1	04	56.44	+ .228				.75		1	05	04.42	3
1	08	21.14	+ .557				.75		1	08	29.45	4
1	15	53.92	+ .601	—0	07.70		.76		1	16	02.28	*5
1	18	50.06	+ .656				.76		1	18	58.48	6
1	22	47.96	+ .342				.76		1	22	56.06	7
1	26	41.06	+ .686				.77		1	26	49.52	8
1	36	30.52	+ .690				.78		1	36	38.99	9
1	41	35.92	+ .629				.78		1	41	44.38	10
1	45	39.76	+ .330				.78		1	45	47.87	11
1	53	38.86	+ .480				.79		1	53	47.13	12
1	58	02.46	+ .240	—0	07.85		.79		1	58	10.49	13
2	02	58.68	+ .150				.79		2	03	06.62	14
2	11	08.60	+ .542			—0	07.80	—1.20	2	11	16.94	15
1	45	40.08				—0	09.20	—0.92	1	45	49.28	16
1	49	02.18					.20		1	49	11.38	17
1	53	37.80					.20		1	53	47.00	18
1	58	01.38		—0	09.17		.21		1	58	10.59	19
2	02	57.68					.21		2	03	06.89	20
2	11	07.66					.22		2	11	16.88	21
2	15	04.88					.22		2	15	14.10	22
2	27	20.64					.23		2	27	29.87	23
2	31	41.34					.23		2	31	50.57	24
2	34	52.70			09.23		.23		2	35	01.93	25
2	40	26 46					.24		2	40	35.70	26
2	43	17.90					.24		2	43	27.14	27
2	46	41.56					.24		2	46	50.80	28
2	49	56.20					.24		2	50	05.44	29
2	53	47.12			09.25		.25		2	53	56.37	*30
2	58	17.50					.25		2	58	26.75	31
3	02	21.32					.25		3	02	30.57	32
3	05	08.78					.25		3	05	18.03	33
3	10	03.38					.26		3	10	12.64	34
3	14	44.12					.26		3	14	53.38	35
4	26	36.94		—0	09.36	—0	09.26	—0.92	4	26	46.20	36
2	40	25.78				—0	10.10	—0.80	2	40	35.88	37
2	46	40.50					.10		2	46	50 60	38
2	49	55.48					.10		2	50	05.58	39
2	53	46.26		—0	10.10		.10		2	53	56.36	40
3	02	20.50				—0	10.10	—0.80	3	02	30.60	41
3	59	41.66	— .047			—0	10.85	—0.82	3	59	52.46	42
4	03	54.04	— .096				.85		4	04	04.79	43
4	06	41.68	— .068				.85		4	06	52.46	44
4	11	41.40	— .154				.86		4	11	52.11	45
4	16	35.24	— .040				.86		4	16	46.06	46
4	26	35.54	— .053	—0	10.79		.86		4	26	46.35	47
4	30	41.44	— .110				.87		4	30	52.20	48
4	37	21.02	— .090				.87		4	37	31.80	29
4	42	32.00	— .074			—0	10.87	—0.82	4	42	42.80	50

Nos. 5, 30. Two stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 16	σ^2 Orionis	5	+13°15′	24.2	49.1	4 47 13.7	38.1	3 0
2	cont'd.	Moon I	(11.2)	+27 38	0.8	29.0	4 52 56.8	24.5	52.8
3		ε Leporis	3.4	—22 35	40.2	6.2	4 58 32.1	57.3	24.0
*4		λ Eridani	6	— 8 58	31.3	56.0	5 01 20.2	44.0	9.0
5		β Orionis	1	— 8 23	53.0	17.6	5 06 42.0	6.3	31.0
6		β Tauri	2	+28 28	7.5	35.0	5 16 02.1	29.0	56.6
7		δ Orionis	2	— 0 25	52.6	17.0	5 23 40 8	4.5	29.0
8		l Aurigæ	6	+30 23	17.3	45.5	5 28 13.1	40.5	8.8
9	16	β Tauri	2	+28 28	3.7	31.2	5 15 58.5	25.7	53.0
10		δ Orionis	2	— 0 25	48.7	18.0	5 23 37.0	1.0	25.3
11		l Aurigæ	6	+30 23	14.0	42.0	5 28 09.6	37.3	5.4
12		α Columbæ	2	—34 10	39.8	9.5	5 33 38.2	6.8	36.5
13		N Tauri	7	+17 40	3.8	29.2	5 37 53.6	18.2	43.8
14		C Tauri	5	+27 34	10.0	37.0	5 43 04.0	31.0	58.2
15		α Orionis	1	+ 7 22	29.2	54.0	5 46 18.0	41.8	6.0
16		B Orionis	6	+ 0 32	34.8	59.0	5 50 23.0	47.0	11.4
17		χ^3 Orionis	5	+20 08	21.2	47.0	5 54 12.5	37.8	3.5
18		θ Leporis	5	—14 56	52.0	17.3	5 58 41.8	6.3	31.2
19		Moon I	(12 2)	+28 11	13.2	41.5	6 02 09 4	37.3	5.7
20		κ Aurigæ	5	+29 33	3.1	31.3	6 04 58.6	26.0	54.0
21		μ Geminor.	3	+22 35	12.0	38.5	6 13 04.3	30.0	56.2
22		z Aurigæ	6	+30 35	8.5	36.8	6 18 04.0	32.2	0.5
23		D^1 Canis Maj.	5	—32 28	4.0	33.0	6 22 01.2	29.5	58.0
24		ν^2 Canis Maj.	5	—19 07	38.2	3.6	6 29 28.8	54.0	19.8
25		ε Geminor.	3	+25 17	0.0	26.5	6 33 53.0	19.4	46.3
26	18	δ Geminor.	3 4	+22 16	25.7	52.2	7 10 18.0	43.6	10.0
27		A Geminor.	6	+25 21	34.1	1.0	7 13 27.5	53.8	20.8
28		β Canis Min.	3	+ 8 37	23.3	48.0	7 18 12.0	36.0	0.7
29		k Geminor.	6	+16 10	22.2	47.8	7 24 12.4	37.0	2.5
*30		α Canis Min.	1.2	+ 5 38	50.6	15.0	7 30 39.0	3.0	27.3
31		β Geminor.	2	+28 24	21.0	48.5	7 35 15.6	42.8	10.3
32		φ Geminor.	5.6	+27 10	32.2	59.6	7 43 26.5	53.0	20 5
33		b Arg. in pup.	5	—38 27	39.8	11.0	7 46 41.4	11.8	43.0
34		ω^1 Cancri	6	+25 50	5.6	32.5	7 50 59.0	25.5	52.5
35		μ^1 Cancri	6	+23 05	41.3	7.8	7 56 33.5	59.2	25.8
36		15 Argus	3.4	—23 51	34.2	0.5	8 00 26.4	52.2	18.8
37		20 Argus	5	—15 18	51.5	17.0	8 05 41.6	6.3	31.8
38		λ Cancri	6	+24 32	52.3	19.5	8 10 45.5	11.3	38.0
39		Moon II	(14.3)	+22 52	58.3	25.5	8 16 52.0	18.3	45.5
40		θ Cancri	5 6	+18 38	21.3	47.0	8 22 12.2	37.4	3.0
41		1044 A. S. C.	6	+ 7 11	15.2	40.0	8 27 04.1	28.0	52.5
42		δ Cancri	4.5	+18 44	28.5	54.2	8 35 19.3	44.5	10.0
43		ε Hydræ	4	+ 7 00	13.0	37.6	8 38 01.5	25.5	50.2
44	20	β Tauri	2	+28 28	59.2	27.3	5 15 54.2	21.2	49.0
45		δ Orionis	2	− 0 25	42.8	7.0	5 23 30.9	54.6	19.0
46		l Aurigæ	5.6	+30 23	9.5	37.6	5 28 05.2	32.7	0.9
47		α Columbæ	2	−34 10	31.6	1.2	5 33 30.0	58.7	28.0
48	23	α Corvi	4.5	—23 50	49.5	16.0	11 59 42.0	8.0	34.5
49		5 Comæ Ber.	6	+21 26	42.0	8.2	12 03 33.8	59.3	26.0

January 16.—Temperature of the observatory during the observations, zero.
20.—☽ ☌ α Leonis.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
4	47	13.62	— .057			—0	10.87	—0.82	4	47	24.43	1
4	52	56.78	— .029				.88		4	53	07.63	2
4	58	31.96	— .123				.88		4	58	42.72	3
5	01	20.10	— .100				.88		5	01	30.88	*4
5	06	41.98	— .098	—0	10.83		.88		5	06	52.76	5
5	16	02.04	— .027		10.83		.89		5	16	12.90	6
5	23	40.78	— .084	—0	11.08		.89		5	23	51.59	7
5	28	13.04	— .022			—0	10.89	—0.82	5	28	23.91	8
5	15	58.42	+ .164	—0	14.25	—0	14.25	—3.29	5	16	12.83	9
5	23	37.00	+ .485		14.30		.27		5	23	51.76	10
5	28	09.66	+ .138				.28		5	28	24.08	11
5	33	38.16	+ .930		14.26		.29		5	33	53.38	12
5	37	53.72	+ .304				.30		5	38	08.32	13
5	43	04.04	+ .178				.31		5	43	18.53	14
5	46	17.80	+ .422		14.27		.32		5	46	32.54	15
5	50	23.04	+ .497				.33		5	50	37.87	16
5	54	12.40	+ .275				.34		5	54	27.01	17
5	58	41.72	+ .669				.35		5	58	56.74	18
6	02	09.42	+ .169				.36		6	02	23.95	19
6	04	58.60	+ .150				.36		6	05	13.11	20
6	13	04.20	+ .244	—0	14.41		.38		6	13	18.82	21
6	18	04.40	+ .134				.39		6	18	18.92	22
6	22	01.14	+ .898				.40		6	22	16.44	23
6	29	28.88	+ .718				.42		6	29	44.02	24
6	33	53.04	+ .208			—0	14.43	—3.29	6	34	07.68	25
7	10	17.90	+ .649	—0	17.45	—0	17.30	—1.60	7	10	35.85	26
7	13	27.44	+ .577				.30		7	13	45.32	27
7	18	12.00	+1.073				.31		7	18	30.38	28
7	24	12.38	+ .845				.32		7	24	30.54	29
7	30	38.98	+1.161		17.17		.32		7	30	57.46	*30
7	35	15.64	+ .432		17.34		.33		7	35	33.40	31
7	43	26.36	+ .479				.33		7	43	44.17	32
7	46	41.40	+2.616				.34		7	47	01.36	33
7	50	59.02	+ .527				.34		7	51	16.89	34
7	56	33.52	+ .621				.35		7	56	51.49	35
8	00	26.42	+2.035		17.44		.35		8	00	45.80	36
8	05	41.64	+1.766				.36		8	06	00.77	37
8	10	45.32	+ .573				.36		8	11	03.25	38
8	16	51.92	+ .628				.37		8	17	09.92	39
8	22	12.18	+ .766				.38		8	22	30.33	40
8	27	03.96	+1.115				.38		8	27	22.45	41
8	35	19.30	+ .764				.39		8	35	37.45	42
8	38	01.56	+1.117	—0	17.30	—0	17.40	—1.60	8	38	20.08	43
5	15	54.18	+1.025	—0	17.62	—0	17.66	—0.20	5	16	12.86	44
5	23	30.86	+3.165		17.75		.66		5	23	51.68	45
5	28	05.18	+ .850				.66		5	28	23.69	46
5	33	29.90	+5.785	—0	17.62	—0	17.66	—0.20	5	33	53.34	47
11	59	42.00	+1.455			—0	28.12	—3.20	12	00	11.57	48
12	03	38.86	+ .705				28.11	—3.20	12	04	02.67	49

Nos. 4, 30. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 23	γ Corvi	3	—16°39′	17.0	42.2	12 07 07.0	31.8	57.0
2	cont'd.	η Virginis	3.4	+ 0 13	27.6	52.0	12 11 15.8	39.6	4.0
3		β Corvi	2.3	—22 31	30.2	5.8	12 25 31.5	57.0	23.6
4		Moon II	(19.5)	— 6 19	9.0	34.0	12 30 58.2	22.4	47.5
5		γ¹ Virginis	4	— 0 34	18.0	42.0	12 33 05.7	29.5	53.5
6		33 Virginis	6	+10 26	58.3	23.0	12 37 47.3	11.5	36.2
7		30 Comæ Ber.	6	+28 25	7.7	35.5	12 41 02.5	29.5	57.2
8		ψ Virginis	5.6	— 8 40	45.5	10.1	12 45 34.2	58.3	23.0
9		r Comæ Ber.	5	+18 16	42.5	8.3	12 50 33.2	58.1	24.0
10		ε Virginis	3.4	+11 49	56.2	21.0	12 53 45.2	9.5	34.3
11		u Comæ Ber.	5	+28 29	8.0	35.7	12 59 03.0	30.2	57.7
12		ι Centauri	3	—35 52	9.0	39.5	13 11 08.8	38.0	8.2
13		α Virginis	1	—10 19	29.0	53.6	13 16 18.0	42.2	6.7
14	25	β Tauri	2	+28 28	45.5	13.3	5 15 40.2	7.3	35.0
15		δ Orionis	2	— 0 25	31.0	55.5	5 23 19.1	42.8	7.4
16		ε Orionis	2.3	— 1 19	46.2	10.7	5 27 34.6	58.5	23.0
17		α Columbæ	2	—34 10	22.3	52.0	5 33 20.8	49.5	18.7
18		61 Virginis	4.5	—17 25	38.5	4.0	13 09 29.0	54.0	19.5
19		u Virginis	6	+ 6 00	43.8	8.3	13 13 32.2	56.0	20.5
20		α Virginis	1	—10 19	23.7	48.5	13 16 12.6	36.7	1.5
21		ζ Virginis	4	+ 0 14	10.7	36.1	13 25 59.0	22.8	47.2
22		m Virginis	5.6	— 7 58	50.7	15.5	13 32 39.5	3.5	28.0
23		O Virginis	6	—11 37	2.2	27.0	13 36 51.4	15.8	40.2
24		μ Centauri	4	—41 40	23.0	55.6	13 39 27.0	58.3	31.0
25		h Centauri	5	—31 08	31.0	59.5	13 43 27.2	55.0	23.6
26		η Bootis	3	+19 12	39.3	4.9	13 46 30.2	55.3	21.0
27		τ Virginis	5	+ 2 19	8.5	33 0	13 52 56.7	20.5	45.0
28		θ Centauri	3	—35 34	44.2	14.2	13 56 43.4	12.5	42.5
29		Moon II	(21.5)	—17 06	56.7	23.0	14 02 48.3	13.6	39.9
30		υ Bootis	6	+10 52	38.0	2.5	14 06 26.8	51.0	16.0
31		λ Virginis	5	—12 38	4.2	29.0	14 09 53.5	18.0	43 0
32	Feb. 2	β Orionis	1	— 8 23	28.1	52.5	5 06 16.8	41.0	5.5
33		β Tauri	2	+28 28	41.8	9.5	5 15 36.5	3.5	31.2
34		β Leporis	4	—20 53	57.2	23.5	5 20 49.0	14.3	40.5
35		δ Orionis	2	— 0 25	28.0	52.1	5 23 15.8	39.5	4.0
36		ε Orionis	2.3	— 1 19	43.5	7.7	5 27 31.5	55.2	19.5
37		α Columbæ	2	—34 10	19.0	48.5	5 33 17.2	46.0	15.5
38		γ Leporis	4	—22 30	21.5	47.8	5 37 13.5	39.2	5.0
39		C Tauri	5	+27 34	48.3	16 0	5 42 42.7	9.5	37.2
40		α Orionis	1	+ 7 22	8.2	33.0	5 45 56.8	20.7	45.5
*41	4	λ Eridani	5	— 8 58	5 5	30.2	5 00 54.2	18.0	43.0
42		β Orionis	1	— 8 23	27.0	51.8	5 06 15.8	39.8	4.5
43		ο Columbæ	5	—35 03	8.7	38.5	5 11 07.6	36.5	6.2
*44		β Tauri	2	+28 28	41.2	9.0	5 15 36.0		
45		β Leporis	4	—20 53	56.5	22.8	5 20 48.1	13.5	40.0
46		δ Orionis	2	— 0 25	26.8	51.2	5 23 15.0	38.8	3.0
47		ε Orionis	2.3	— 1 19	42.5	6.8	5 27 30.7	54.5	18.6
48		α Columbæ	2	—34 10	17.4	47.0	5 33 16.0	45.0	14.3
*49		γ Leporis	4	—22 30	20.2	47.0	5 37 12.5	38.0	4.5
50		C Tauri	5	+27 34	47.3	15.1	5 42 41.8	8.5	36.0

January 23 —☽ ☌ χ Virginis.
25.—The chronometer was exposed to the external temperature eight hours.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
12	07	07.00	+1.291			—0	28.11	—3.20	12	07	36.40	1
12	11	15.80	+ .937				.10		12	11	44.84	2
12	25	31.42	+1.425	—0	27.89		.08		12	26	00.92	3
12	30	58.22	+1.071				.07		12	31	27.36	4
12	33	05.74	+ .952				.07		12	33	34.76	5
12	37	47.26	+ .726				.06		12	38	16.05	6
12	41	02.48	+ .309				.05		12	41	30.84	7
12	45	34.22	+1.120				.04		12	46	03.38	8
12	50	33 22	+ .556				.03		12	51	01.81	9
12	53	45.24	+ .697				.02		12	54	13.96	10
12	59	02.92	+ .308				.01		12	59	31.24	11
13	11	08.70	+1.785				27.98		13	11	38.46	12
13	16	17.00	+1.126	—0	28.17	—0	27.97	—3.20	13	16	47.00	13
5	15	40.26		—0	32.53	—0	32.62	—6.20	5	16	12.88	14
5	23	19.16			32.58		.64		5	23	51.80	15
5	27	34.60			32.91		.66		5	28	07.26	16
5	33	20.66		—0	32.60		32.69		5	33	53.35	17
13	09	29.00					34.64		13	10	03.64	18
13	13	32.16					.66		13	14	06.82	19
13	16	12.60			34.67		.68		13	16	47.28	20
13	25	58.96					.72		13	26	33.68	21
13	32	39.44					.75		13	33	14.19	22
13	36	51.32					.77		13	37	26.09	23
13	39	26.98					.78		13	40	01.76	24
13	43	27.26					.80		13	44	02.06	25
13	46	30.14		—0	34.81		.81		13	47	04.95	26
13	52	56.74					.83		13	53	31.57	27
13	56	43.36					.85		13	57	18.21	28
14	02	48.30					.87		14	03	23.17	29
14	06	26.86					.90		14	07	01.76	30
14	09	53.54				—0	34.92	—6.20	14	10	28.46	31
5	06	16.78	— .247	—0	36.04	—0	36.06	—0.17	5	06	52.59	32
5	15	36.50	— .068		36.29		.06		5	16	12.49	33
5	20	48.90	— .309				.06		5	21	24.65	34
5	23	15.88	— .211		35.80		.06		5	23	51.73	35
5	27	31.48	— .215		36.17		·06		5	28	07.33	36
5	33	17.24	— .386		36.28		.06		5	33	52.91	37
5	37	13.40	— .317				.06		5	37	49.14	38
5	42	42.74	— .074				.06		5	43	18.73	39
5	45	56.84	— .176	—0	35.76	—0	36.06	—0.17	5	46	32.72	40
5	00	54.18	+ .450			—0	36.41	—0.16	5	01	31.04	*41
5	06	15.78	+ .435	—0	36.34		.41		5	06	52.62	42
5	11	07.50	+ .595				.41		5	11	44.50	43
5	15	36.00	+ .123		36.58		.41		5	16	12.53	*44
5	20	48.18	+ .556				.41		5	21	25.15	45
5	23	14.96	+ .374		36.32		.41		5	23	51.74	46
5	27	30.62	+ .388		36.42		.41		5	28	07.42	47
5	33	15.94	+ .694	—0	36.48		.41		5	33	53.04	48
5	37	12.44	+ .570				.41		5	37	49.42	*49
5	42	41.74	+ .133			—0	36.41	—0.16	5	43	18.28	50

Nos. 41 and 49. Two stars in the field of the instrument.
No. 44. The observation is doubtful.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Feb. 4	α Orionis	1	+ 7°22′	7.0	31.8	5 45 55.5	19.5	44.2
2	11	k^2 Ceti	5.6	— 1 31	49.0	13.2	3 09 37.1	1.0	25.2
3		ο Tauri	4.5	+ 8 28	49.8	14.2	3 15 38.3	2.4	27.0
4		s Tauri	5	+10 47	17.0	41.7	3 21 06.0	30.3	55.0
5		7 Tauri	6	+23 55	31.6	58.5	3 24 24.5	50.5	17.2
*6		E Tauri	5	— 0 07	20.2	44.6	3 28 08.5	32.2	56.5
7		12 Tauri	6	+ 2 32	9.0	33.3	3 30 57.2	21.0	45.3
*8		g Pleiadum	5.6	+23 47			3 34 43.5		
9		b Pleiadum	4.5	+23 36	56.5	23.0	3 34 49.0	15.0	41.5
10		η Tauri	3	+23 36	32.5	59.0	3 37 25.0	51.0	17.5
11		f Pleiadum	5	+23 34	12.5	39.2	3 39 05.2	31.2	58.0
12		h Pleiadum	5.6	+23 39			3 39 06.2		
13		u^2 Tauri	6	+ 6 03	6.0	30.7	3 42 54.5	18.2	43.0
14		32 Tauri	6	+22 01	59.5	25.8	3 46 51.4	17.0	43.3
15		441 A. S. C.	6.7	+17 44	11.5	37.0	3 51 02.0	27.0	52.5
16		A^1 Tauri	5	+21 38	49.0	15.3	3 54 40.7	6.1	32.5
17		A^2 Tauri	7	+21 34			3 55 18.4		
18		ω^1 Tauri	6	+19 10	26.2	52.0	3 59 17.3	42.2	8.0
19		463 A. S. C.	7	+22 00	56.6	23.0	4 02 48.6	14.2	40.6
20		ω^2 Tauri	5.6	+20 10			4 07 19.9	45.0	11.0
21		γ Tauri	3.4	+15 14	18.0	43.2	4 10 07.9	32.3	57.7
22		62 Tauri	7	+23 55	55.0	21.6	4 13 47.6	13.5	40.2
23		ε Tauri	4	+18 49	52.2	18.0	4 18 43.1	8.0	34.0
24		85 Tauri	6.7	+15 30	20.0	45.2	4 22 10.0	34.5	59.6
25		α Tauri	1	+16 11	20.7	46.2	4 26 11.0	35.6	1.0
26		Moon I	(8.4)	+27 07	41.2	9.5	4 28 36.9	4.3	32.5
27		547 A. S. C.	6	+10 50	11.3	36.0	4 35 00.3	24.7	49.2
28		K Tauri	6.7	+15 37	11.5	36.8	4 40 01.5	26.0	51.3
29		o^1 Orionis	5	+13 58	6.0	31.0	4 42 55.5	20.0	45.0
30		572 A. S. C.	6.7	+23 41	40.5	7.0	4 47 33.0	59.0	25.3
31		ι Tauri	4.5	+21 21	7.0	33.0	4 52 58.7	24.3	50.2
32		m Tauri	5	+18 25			4 57 26.2	51.3	17.0
33		β Orionis	1	— 8 23	28.5	53.3	5 06 17.2	41.2	6.0
34		ο Columbæ	5	—35 08	10.6	40.2	5 11 09.2	38.5	8.0
35		β Tauri	2	+28 28	42.8	10.5	5 15 37.5	4.5	32.3
36		β Leporis	4	—20 53	58.2	34.4	5 20 49.7	15.0	41.3
37		δ Orionis	2	— 0 25	28.5	52.8	5 23 16.5	40.2	4.5
38		ε Orionis	2.3	— 1 19	44.0	8.2	5 27 32.3	56.2	20.5
39		α Columbæ	2	—34 10	20.0	49.2	5 33 17.9	46.6	16.0
*40	12	λ Eridani	4	— 8 58	8.0	32.6	5 00 56.8	21.0	45.6
*41		β Orionis	1	— 8 23	29.9	54.4	5 06 18.3	42.4	7.0
42		ο Columbæ	5	—35 08	11.5	41.4	5 11 10.5	39.6	9.4
43		β Tauri	2	+28 28	44.0	11.7	5 15 38.7	5.6	33.5
44		β Leporis	4	—20 53			5 20 51.0	16.5	42.5
45		δ Orionis	2	— 0 25	29.5	53.9	5 23 17.6	41.2	5.7
46		ε Orionis	2.3	— 1 19	45.2	9.7	5 27 33.4	57.0	21.3
47		α Columbæ	2	—34 10	21.0	50.5	5 33 19.2	47.9	17.4
48		Moon I	(9.5)	+28 17	26.3	55.1	5 35 22.6	50.2	19.0
49		μ Columbæ	6	—32 22	34.0	3.0	5 39 31.0	59.0	28.0
50		C Tauri	5	+27 34	50.1	17.3	5 42 44.4	11.5	38.8
51		α Orionis	1	+ 7 22	10.0	34.5	5 45 58.5	22.5	47.0

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
5	45	55.60	+ .317	—0	36.50	—0	36.41	—0.16	5	46	32.33	1
3	09	37.10				—0	35.15	+0.70	3	10	12.25	2
3	15	38.34					.15		3	16	13.49	3
3	21	06.00					.15		3	21	41.15	4
3	24	24.46					.14		3	24	59.60	5
3	28	08.40					.14		3	28	43 54	*6
3	30	57.16					.14		3	31	32.30	7
3	34	43.50					.14		3	35	18.64	*8
3	34	49.00					.14		3	35	24.14	9
3	37	25.00			35.04		.14		3	38	00.14	10
3	39	05.22					.14		3	39	40.36	11
3	39	06.20					.13		3	39	41.33	12
3	42	54.48					.13		3	43	29.61	13
3	46	51.40					.13		3	47	26.53	14
3	51	02.00					.13		3	51	37.13	15
3	54	40.72					.13		3	55	15.85	16
3	55	18.40					.13		3	55	53.53	17
3	59	17.14					.12		3	59	52.26	18
4	02	48.60					.12		4	03	23.72	19
4	07	19.78					.12		4	07	54.90	20
4	10	07.80					.12		4	10	42.92	21
4	13	47.58					.12		4	14	22.70	22
4	18	43.06					.12		4	19	18.18	23
4	22	09.86					.11		4	22	44.97	24
4	26	10.90			35.10		.11		4	26	46.01	25
4	28	36.88					.11		4	29	11.99	26
4	35	00.30					.11		4	35	35.41	27
4	40	01.42					.11		4	40	36.53	28
4	42	55.50					.11		4	43	30.61	29
4	47	32.96					.10		4	48	08.06	30
4	52	58.64					.10		4	53	33.74	31
4	57	26.25					.10		4	58	01.35	32
5	06	17.24			35.22		.10		5	06	52.34	33
5	11	09.30					.09		5	11	44.39	34
5	15	37.52			35.09		.09		5	16	12.61	35
5	20	49.72					.09		5	21	24.81	36
5	23	16.50			35.09		.09		5	23	51.59	37
5	27	32.24			35.11		.08		5	28	07.32	38
6	33	17.94		—0	35.06	—0	35.08	+0.70	5	33	53.02	39
5	00	56.80	+ .150			—0	33.80	+1.16	5	01	30.75	*40
5	06	18.40	+ .148	—0	33.90		.79		5	06	52.34	*41
5	11	10.48	+ .235				.79		5	11	44.50	42
5	15	38.70	+ .041		33.86		.78		5	16	12.52	43
5	20	51.00	+ .185				.78		5	21	24.96	44
5	23	17.58	+ .127		33.86		.78		5	23	51.49	45
5	27	33.32	+ .129		33.89		.77		5	28	07.22	46
5	33	19.20	+ .231		33.55		.77		5	33	53.20	47
5	35	22.64	+ .042				.77		5	35	56.45	48
5	39	31.00	+ .224				.77		5	40	04.99	49
5	42	44 42	+ .044				.76		5	43	18.22	50
5	45	58.50	+ .106	—0	33.72	—0	33.76	+1.16	5	46	32.37	51

Nos. 6, 40, and 41. Two stars in the field of the instrument.
8. *g* Pleiadum. There is an error of — 1*s*. in recording this star, as shown by the reduction, page 220.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Feb. 12	γ Columbæ	5	—35°18′	20.7	50.3	5 51 19.7	49.0	18.5
2	cont'd.	C Orionis	6	+ 4 10	10.7	35.0	5 55 59.0	23.0	47.3
3		759 A. S. C.	6.7	+22 13	29.6	56.0	5 59 21.6	47.2	13.6
4		κ Aurigæ	4	+29 33	44.0	12.0	6 04 39.3	6.6	34.5
5		l Orionis	6	+10 00	56.3	21.2	6 07 45.2	9.3	34.3
6		μ Geminorum	3	+22 36	52.8	19.3	6 12 45.1	10.8	37.2
7	15	ω^1 Cancri	6	+25 49	51.1	18.2	7 50 45.0	11.5	38.5
8		6 Cancri	5.6	+28 14	16.5	44.2	7 53 11.2	38.2	6.0
9		15 Argus	3.4	—23 51	21.0	47.3	8 00 13.6	39.7	6.2
10		19 Argus	6	—12 27	26.2	51.2	8 03 15.6	40.0	5.0
11		β Cancri	4	+ 9 40	31.3	56.0	8 07 20.2	44.4	9.0
12		q Arg. in pup.	4.5	—36 10	4.2	34.5	8 12 04.0	33.5	3.8
13		d^2 Cancri	6	+17 34	26.0	51.3	8 16 16.3	·41.3	6.8
14		θ Cancri	5.6	+18 38	7.5	33.0	8 21 58.3	23.5	49.0
*15		1044 A. S. C.	6	+ 7 10	2.0	26.3	8 26 50.8	14.3	39.0
*16		ι Cancri	6	+20 06	55.0	20.7	8 30 46.2	11.5	37.3
17		γ Cancri	5	+22 02	39.6	46.0	8 33 31.5	57.0	23.5
18		ι Hydræ	4	+ 7 00	59.5	24.1	8 37 48.0	12.0	36.6
19		B Hydræ	5.6	— 2 51	1.0	25.3	8 40 49.2	13.0	37.4
20		Moon I	(12.6)	+20 25	35.6	2.5	8 46 28.6	54.6	21.3
21		ν Cancri	6	+25 05	0.0	26.6	8 52 53.0	19.3	46.0
22		ξ Cancri	5.6	+22 41	47.3	13.9	8 59 39.5	5.2	31.8
23		θ Hydræ	4.5	+ 2 59	44.0	8.5	9 05 32.3	56.0	20.5
24		q Cancri	6	+18 23	42.3	8.0	9 09 33.0	58.0	28 6
25		κ Leonis	5	+26 52	56.0	23.6	9 14 50.0	16.5	44.2
26		α Hydræ	2	— 7 58	24.8	49.3	9 19 13.5	37.6	2.0
27	19	δ Leonis	3	+21 24	18.0	44.0	11 05 09.6	35.1	1.3
28		δ Hyd.& Crat.	3.4	—13 55	5.2	30.5	11 10 54.9	19.2	44.5
29		γ Hyd.& Crat.	4	—16 48	37.3	2.8	11 16 27.6	52.5	18.0
*30		τ Leonis	4	+ 3 44	28.2	52.8	11 19 16.5	40.3	5.6
31		ξ Hyd.& Crat.	4	—30 58	46 9	15.0	11 24 43.0	11.0	39.0
32		υ Leonis	4.5	+ 0 03	31.4	55.6	11 28 19.5	43.3	7.5
33		92 Leonis	5.6	+22 15	9.5	36.0	11 32 01.6	27.3	53.9
34		ζ Hyd.& Crat.	4	—17 28	23.2	48.8	11 36 13 6	38.5	4.3
35		β Virginis	3.4	+ 2 40	7.5	32.0	11 41 55.9	19.7	44.0
36		A Virginis	6	+ 9 20	35.8	0.5	11 46 24.6	48.7	13.3
37		b Virginis	5.6	+ 4 33	31.0	55.5	11 51 19.3	43.0	7.5
38		o Virginis	4.5	+ 9 37	49.0	13.5	11 56 37.5	1.5	26.0
39		r Virginis	6	+ 2 48	15.4	39.7	12 01 03.4	27.2	51.4
40		l Virginis	6	+11 09	2.0	26.8	12 04 51.0	15.2	40.1
41		Moon II	(16.7)	— 3 39	8.2	33.0	12 09 57.5	22.0	46.7
42		η Virginis	3.4	+ 0 13			12 11 17.0	41.0	5.5
43		f Comæ Ber.	5	+26 59	56.6	24.0	12 15 50.6	17.2	44.8
44		α Comæ Ber.	5	+27 43	38.4	6.0	12 18 33.0	0.0	27.6
45		δ Corvi	3	—15 37	19.3	45.0	12 21 09.7	34.7	59.6
46		β Corvi	2.3	—22 31	41.5	8.0	12 25 33 6	59.2	25.8
47		d Hyd.& Crat.	5.6	—26 15	54.3	21.5	12 28 48.0	14.5	41.8
48		γ^1 Virginis	4	— 0 34	19.0	43.2	12 33 07.1	31.0	55.5
49	20	γ Corvi	3	—16 39	19.5	44.8	12 07 09.5	34.5	0.0
50		η Virginis	3.4	+ 0 13	29.6	54.0	12 11 18.0	41.8	6.0

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
5	51	19.64	+ .236			—0	33.75	+1.16	5	51	53.63	1
5	55	59.00	+ .114				.75		5	56	32.86	2
5	59	21.60	+ .062				.75		5	59	55.41	3
6	04	39.28	+ .037				.74		6	05	13.06	4
6	07	45.26	+ .098				.74		6	08	19.10	5
6	12	45.04	+ .061	—0	33.64	—0	33.74	+1.16	6	13	18.84	6
7	50	44.86	+ .140			—0	31.85	+0.71	7	51	16.85	7
7	53	11.22	+ .114				.85		7	53	43.18	8
8	00	13 56	+ .509	—0	31.86		.84		8	00	45.91	9
8	03	15.60	+ .440				.84		8	03	47.88	10
8	07	20.18	+ .272				.84		8	07	52.29	11
8	12	04.00	+ .658				.84		8	12	36.50	12
8	16	16.34	+ .210				.84		8	16	48.39	13
8	21	58.26	+ .200				.83		8	22	30.29	14
8	26	50.38	+ .291				.83		8	27	22.50	*15
8	30	46.14	+ .188				.83		8	31	18.16	*16
8	33	31.52	+ .172				.83		8	34	03.52	17
8	37	48.04	+ .293		31.87		.83		8	38	20.16	18
8	40	49.18	+ .367				.83		8	41	21.38	19
8	46	28.52	+ .186				.83		8	47	00.54	20
8	52	52 98	+ .143				.83		8	53	24.95	21
8	59	39.54	+ .170				.82		9	00	11.53	22
9	05	32.26	+ .328				.82		9	06	04.41	23
9	09	32.98	+ .200				.82		9	10	05.00	24
9	14	50.06	+ .138				.82		9	15	22.02	25
9	19	13.44	+ .405	—0	31.77	—0	31.81	+0.71	9	19	45.65	26
11	05	09.60	— .177	—0	28.45	—0	28.43	+0.72	11	05	37.85	27
11	10	54.86	— .452		28.46		.43		11	11	22.84	28
11	16	27.64	— .473				.42		11	16	55.59	29
11	19	16.56	— .317				.42		11	19	44.66	*30
11	24	42.98	— .596				.42		11	25	10.80	31
11	28	19 46	— .345				.42		11	28	47.54	32
11	32	01.66	— .172				.42		11	32	29.91	33
11	36	13.68	— .480				.42		11	36	41.62	34
11	41	55.82	— .326				.42		11	42	23.91	35
11	46	24.58	— .273				.42		11	46	52.73	36
11	51	19.26	— .311				.41		11	51	47.36	37
11	56	37.50	— .272				.41		11	57	05.64	38
12	01	03.42	— .325				.41		12	01	31.51	39
12	04	51.02	— .270				.41		12	05	19.16	40
12	09	57.48	— .372				.41		12	10	25.52	41
12	11	16.88	— .344				.40		12	11	44.94	42
12	15	50.64	— .126				.40		12	16	18.91	43
12	18	33.00	— .120				.40		12	19	01.28	44
12	21	09.62	— .465				.40		12	21	37.55	45
12	25	33.62	— .522	—0	28.35		.40		12	26	01.50	46
12	28	48.02	— .557				.40		12	29	15.86	47
12	33	07.16	— .349			—0	28.39	+0.72	12	33	35.20	48
12	07	09.46	— .258			—0	27.57	+0.48	12	07	36.77	49
12	11	17.88	— .187				.57		12	11	45.26	50

No 15. A fine double star.
16. Nine stars in the field of the instrument.
30. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s	s.
1	Feb. 20	*f* Comæ Ber.	5	+26°59′	57.5	25.0	12 15 51.6	18 2	45.6
2	cont'd.	*u* Comæ Ber.	5	+27 43	39.4	7.0	12 18 33.8	0.5	28.2
3		δ Corvi	3	—15 37	20.1	45.2	12 21 10.0	34.8	0.0
4		β Corvi	2.3	—22 31	42.0	8.5	12 25 34.2	0.0	26.5
5		*d* Hyd.& Crat.	5.6	—26 15	55.0	22.0	12 28 48.7	15.3	42.3
6		γ^1 Virginis	4	— 0 34	19.9	44.0	12 33 07.9	31.8	56.0
7		*n* Comæ Ber.	6	+17 27	23.3	49.0	12 38 13.9	38.8	4.5
8		*p* Comæ Ber.	5.6	+28 25	34.1	2.0	12 43 29.0	56.0	23.8
9		δ Virginis	3.4	+ 4 16	19.0	43.4	12 47 07.2	31.0	55.5
*10		37 Comæ Ber.	7	+31 39	15.0	43.5	12 52 11.5	39.5	8.1
11		Moon II	(17.7)	— 9 37	7.5	32.8	12 55 57.4	22.0	47.2
12		θ Virginis	4.5	— 4 41	26.2	50.8	13 01 14.6	38.5	3.0
13		55 Virginis	6	—19 05	21.0	46.5	13 05 11.9	37.3	3.0
14		ι Centauri	3	—35 52	12.6	42.5	13 11 12.0	41.5	11.5
15		α Virginis	1	—10 20	31.6	56.5	13 16 20.7	44.8	9.5
16	22	κ Virginis	4	— 9 32	8 0	32.9	14 03 57.0	21.0	45.8
17		α Bootis	1	+20 01	5.5	31.3	14 07 56.7	22.1	48.0
18		*y* Bootis	6	+17 02	55.1	20.6	14 11 45.5	10.5	36.0
*19		1636 A. S. C.	5.6	+ 6 33	0.0	24.6	14 15 48.5	12.5	37.0
20		φ Virginis	5	— 1 30	44.2	8.5	14 19 32.4	56.2	20.3
21		ρ Bootis	4	+31 05	34.5	3.0	14 24 30.8	58.6	27.0
22		σ Bootis	5	+30 27	21.5	49.9	14 27 17.5	45.0	13.3
23		Moon II	(19.8)	—19 51	38.6	5.5	14 30 31.2	57.0	23.8
24		31 Bootis	4.5	+27 13	3.7	31.2	14 35 58.0	24.8	52.3
25		ε Bootis	3	+27 45	40.0	7.5	14 37 34.6	1.5	29.0
*26		α^2 Libræ	3	—15 21	47.0	12.2	14 41 36.9	1.5	27.0
27		1698 A. S. C.	6	+17 02	28.1	53.8	14 49 18.8	43.6	9.2
28		20 Libræ	3.4	—24 39	24.9	51.8	14 54 18.0	44.1	11.0
29	24	α Columbæ	2	—34 10	29.7	58.8	5 33 27.5	56.4	25.8
30		μ Columbæ	6	—32 22	42.0	11.5	5 39 39.5	7.5	36.2
31	25	α Andromedæ	1	+28 12	46.7	14.6	23 59 41.5	8.3	36.2
32		λ Eridani	4	— 8 58	17.5	41.2	5 01 05.3	29.5	54.0
33		617 A. S. C.	5	— 8 20	39.0	3.5	5 05 27.6		
34		β Orionis	1	— 8 23	38.5	3.0	5 06 27.0	51.0	15.5
35		Columbæ	7	—35 0—		9.5	5 09 38.5	7.5	
36		ο Columbæ	6	—35 03	20.5	50.2	5 11 19.2	48.2	18.0
37		β Tauri	2	+28 28	52.2	20.0	5 15 47.0	14.0	41.8
38		β Leporis	4	—20 53	8.0	34.0	5 20 59.6	25.0	51.2
*39		δ Orionis	2	— 0 25	37.8	2.2	5 23 26.1	50.0	14.3
*40		ε Orionis	2.3	— 1 19	53.5	18.0	5 27 41.9	5.8	30.2
41		α Columbæ	2	—34 10	29.5	38.9	5 33 27.6	56.2	26.0
42		μ Columbæ	5	—32 22	42.2	11.3	5 39 39.4	7.5	36.6
43		C Tauri	5	+27 34	58.2	26.0	5 42 52.6	19.3	47.0
44		α Orionis	1	+ 7 22	18.5	43.0	5 46 07.0	31.0	55.5
45	26	α Andromedæ	1	+28 12	47.0	14.5	23 59 41.6	8.5	36 1
46		β Orionis	1	— 8 23	38.5	8.0	5 06 27.2	51.2	15.8
47		ο Columbæ	5	—35 03	20.8	50.7	5 11 19.7	48.6	18.5
48		β Tauri	2	+28 28	52.3	20.2	5 15 47.1	14.1	42.0
49		β Leporis	4	—20 53	8.3	34.4	5 21 00.0	25.3	51.5

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
12 15 51.58	— .069		—0 27.57	+0.48	12 16 19.08	1
12 18 33.78	— .065		.57		12 19 01.29	2
12 21 10.02	— .254		.57		12 21 37.34	3
12 25 34.24	— .285	—0 27.51	.56		12 26 01.52	4
12 28 48.66	— .304		.56		12 29 15.92	5
12 33 07.92	— .190		.56		12 33 35.29	6
12 38 13.90	— .115		.56		12 38 41.35	7
12 43 28.98	— .061		.56		12 43 56.48	8
12 47 07.22	— .171		.56		12 47 34.61	9
12 52 11.52	— .041		.56		12 52 39.04	*10
12 55 57.38	— .228		.56		12 56 24.71	11
13 01 14.62	— .208		.56		13 01 41.97	12
13 05 11.94	— .269		.56		13 05 39.23	13
13 11 12.02	— .357		.56		13 11 39.22	14
13 16 20.62	— .231	—0 27.62	—0 27.56	+0.48	13 16 47.95	15
14 03 56.94	— .379		—0 27.12	+0.35	14 04 23.68	16
14 07 56.72	— .172	—0 27.09	.12		14 08 23.67	17
14 11 45.54	— .195		.12		14 12 12.47	18
14 15 48.52	— .269		.12		14 16 15.37	*19
14 19 32.32	— .324		.12		14 19 59.12	20
14 24 30.78	— .079		.12		14 24 57.82	21
14 27 17.44	— .084		.12		14 27 44.48	22
14 30 31.22	— .454		.12		14 30 57.89	23
14 35 58.00	— .118		.12		14 36 25.01	24
14 37 34.52	— .109	27.14	.12		14 38 01.53	25
14 41 36.92	— .420	—0 27.14	.12		14 42 03.62	*26
14 49 18.70	— .195		.12		14 49 45.63	27
14 54 17.96	— .493		—0 27.12	+0.35	14 54 44.59	28
5 33 27.64	— .462	—0 25.56	—0 25.56	+0.66	5 33 52.74	29
5 39 39.34	— .448		—0 25.56	+0.66	5 40 04.45	30
23 59 41.46	— .063	—0 25.65	—0 25.46	+0.10	0 00 06.86	31
5 01 05.50	— .225		.44		5 01 30.72	32
5 05 27.60	— .223		.44		5 05 52.82	33
5 06 27.00	— .222	25.47	.44		5 06 52.22	34
5 09 38.50	— .351		.44		5 10 03.59	35
5 11 19.22	— .351		.44		5 11 44.31	36
5 15 47.00	— .061	25.47	.44		5 16 12.38	37
5 20 59.56	— .277		.44		5 21 24.72	38
5 23 26.08	— .190	25.50	.44		5 23 51.33	*39
5 27 41.88	— .193	25.47	.44		5 28 07.13	*40
5 33 27.64	— .347	25.42	.44		5 33 52.73	41
5 39 39.40	— .336		.44		5 40 04.50	42
5 42 52.62	— .066		.44		5 43 17.99	43
5 46 07.00	— .158	—0 25.32	—0 25.44	+0.10	5 46 32.28	44
23 59 41.64	— .229	—0 25.73	—0 25.62	—0.23	0 00 06.93	45
5 06 27.14	— .808	25.91	.67		5 06 52.00	46
5 11 19.66	—1.280		.67		5 11 44.05	47
5 15 47.14	— .223	—0 25.47	.67		5 16 12.59	48
5 20 59.90	—1.008		—0 25.67	—0.23	5 21 24.56	49

No. 10. It is probable that the light of 37 Comæ Ber. is partially intercepted.
19, 26, 39. Two stars in the field of the instrument.
40 Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	Feb. 26	δ Orionis	2	— 0°25′	38.0	2.5	5 23 26.3	50.1	14.5
2	cont'd.	ε Orionis	2 3	— 1 19	54.0	18.3	5 27 42.1	5.8	30.3
3		α Columbæ	2	—34 10	31.1	59.4	5 33 28.3	57.2	26.5
4		μ Columbæ	5	—32 22	43.0	11.9	5 39 40.0	8.1	37.2
5		C Tauri	5	+27 34	58.6	26.0	5 42 53.0	19.9	47.2
6		α Orionis	1	+ 7 22	18.6	43.2	5 46 07.2	31.2	56 0
7	Mar. 9	ε Canis Maj.	2.3	—28 45	15.0	42.6	6 52 10.0	37.2	4.6
8		γ Canis Maj.	4	—15 24	30.3	55.6	6 56 20.2	45.0	10.2
9		τ Geminorum	5	+30 30	50.3	18.8	7 00 46.1	14.0	42.1
*10		m Monocer.	4.5	— 0 14	42.5	7.0	7 03 30.8	54.6	19.0
11		e¹ Canis Maj.	4.5	—26 04	39.8	7.0	7 07 33.2	59.8	27.0
12		δ Geminorum	3.4	+22 16	31.2	57.5	7 10 23 2	49.0	15.3
*13		ι Geminorum	4	+28 07	42.0	9.5	7 15 36.5	8.5	31.1
14		ο Canis Min.	5.6	+12 20	53.3	18.3	7 20 43.0	7.0	32.0
15		υ Geminorum	5	+27 15	58.8	26.0	7 25 52.9	19.8	47.2
*16		α Canis Min.	1.2	+ 5 38	56.2	20.8	7 30 44.7	8.5	33.1
17		β Geminorum	2	+28 24	25.9	53.2	7 35 20.5	47.8	15.3
18	11	β Orionis	1	— 8 23	55.0	19.8	5 06 43.9	8.0	32.5
19		β Tauri	2	+28 28	8.5	36.5	5 16 03.6	30.6	58.5
20		β Leporis	4	—20 53	24.6	50 8	5 21 16 3	41.8	8.0
21		δ Orionis	2	— 0 25	54.6	19.2	5 23 42.9	6.6	31.0
22		ε Orionis	2.3	— 1 19	10.4	35.0	5 27 58.8	22.5	46.8
23		α Columbæ	2	—34 10	46.5	16.0	5 33 44.8	13.5	43.0
24		μ Columbæ	5	—32 22	59.6	28 3	5 39 56.5	24.6	53.5
25		C Tauri	4	+27 34	15.1	42.7	5 43 09.2	36.3	3.6
26		α Orionis	1	+ 7 22	35.3	59.8	5 46 23 7	47.6	12.0
27		γ Columbæ	5	—35 18	46.2	16.0	5 51 45.4	14.8	44.3
28		C Orionis	6	+ 4 10	36.0	0.5	5 56 24.2	48.0	12.5
29		τ Leporis	6	—19 09	46.1	12.0	6 00 37.3	2.5	28.3
30		κ Aurigæ	4	+29 33	8.7	36.7	6 05 04.2	31.6	59.6
31		l Orionis	6	+10 00	21.6	46.3	6 08 10.5	34.6	59.3
32		μ Geminorum	3	+22 35	17.7	44.2	6 13 10.0	35.5	2.0
33		λ Canis Maj.	4	—33 22			6 16 09.6	38.0	7.0
34		Moon I	(7.8)	+28 01	1.2	29.3	6 21 57.2	25.0	53.2
*35		c Aurigæ	6	+28 08	6.0	38.8	6 25 00.7	27.6	55.2
36		ν² Canis Maj.	5	—19 07	44.6	10.4	6 29 35.5	30.5	26.5
37		ε Geminorum	3	+25 17	5.3	32.1	6 33 58.5	25.0	31.7
38		α Canis Maj.	1	—16 30	8.5	34.2	6 37 59.0	23.8	49.5
*39		κ² Canis Maj.	4	—32 20	48.5	17.3	6 43 45.7	14.0	42.5
40		π² Canis Maj.	6	—20 12	10.3	36.0	6 48 01.6	27.0	53.0
*41		ε Canis Maj.	2.3	—28 45	19.0	46.7	6 52 14 0	41.2	9.0
42		γ Canis Maj	4	—15 24	34.4	59.9	6 56 24.6	49.0	14.6
43		τ Geminorum	5	+30 30	55.0	23.0	7 00 50.6	18.2	46.4
*44	13	α Canis Min.	1.2	+ 5 38	3.4	27.9	7 30 51.9	15.3	40.1
45		β Geminorum	2	+28 24	32.9	0.5	7 35 27.6	54.6	22.3
*46		c Arg. in pup.	5	—37 35	29.6	0.0	7 39 30.0	0.0	30.5
*47		φ Geminorum	5	+27 10	44.4	11.6	7 43 38.3	5.0	32.3
48		1 Cancri	6	+16 13	0.5	26.0	7 47 50.6	15.2	40.8
49		8 Cancri	6	+13 34	16.5	41.7	7 56 06.2	30.5	55.6
50		15 Argus	3.4	—23 51	47.7	14.3	8 00 40.4	6.3	33.0

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h*	*m.*	*s.*	
5	23	26.28	—.691	—0	25.78	—0	25.67	—0.23	5	28	51.26	*1
5	27	42.10	—.703		25.75		.67		5	28	07.07	2
5	33	28.30	—1.260		25.65		.67		5	33	52.71	3
5	39	40.04	—1.221				.67		5	40	04.49	4
5	42	52.94	—.242				.67		5	43	18.37	5
5	46	07.24	—.574	—0	25.47	—0	25.67	—0.23	5	46	32.34	6
6	52	09.88	—.928	—0	12.74	—0	12.87	+2.04	6	52	21.82	7
6	56	20.26	—.741				.86		6	56	32.38	8
7	00	46.26	—.149				.86		7	00	58.97	9
7	03	30.78	—.555				.85		7	03	43.08	*10
7	07	33.36	—.887				.85		7	07	45.32	11
7	10	23.24	—.272		12.78		.84		7	10	35.81	12
7	15	36.52	—.187				.84		7	15	49.17	*13
7	20	42.72	—.402				.84		7	20	55.16	14
7	25	52.94	—.200				.83		7	26	05.57	15
7	30	44.66	—.485		12.95		.82		7	30	57.00	*16
7	35	20.54	—.182	—0	12.90	—0	12.81	+2.04	7	35	33.17	17
5	06	43.94	—.804	—0	08.86	—0	08 94	+1.80	5	06	52.08	18
5	16	03.54	—.222		08.83		.93		5	16	12.25	19
5	21	16.30	—1.002				.92		5	21	24.22	20
5	23	42.86	—.686		08.98		.92		5	23	51.09	21
5	27	58.70	—.700		08.92		.91		5	28	06.91	22
5	33	44.76	—1.253		08.86		.90		5	33	52.41	23
5	39	56.50	—1.213				.89		5	40	04.18	24
5	43	09.38	—.240				.89		5	43	18.03	25
5	46	23.68	—.528		08.82		.89		5	46	32.04	26
5	51	45.34	—1.277				.89		5	51	52.95	27
5	56	24.24	—.619				.88		5	56	32.50	28
6	00	37.24	—.974				.88		6	00	45.15	29
6	05	04.16	—.202				.87		6	05	12.83	30
6	08	10.46	—.532				.87		6	08	18.80	31
6	13	09.88	—.329		08.80		.86		6	13	18.41	32
6	16	09.50	—1.235				.86		6	16	17.13	33
6	21	57.18	—.232				.85		6	22	05 80	34
6	25	00.66	—.231				.85		6	25	09.28	*35
6	29	35.50	—.974				.84		6	29	43.37	36
6	33	58.52	—.282				.83		6	34	07 07	37
6	37	59.00	—.930		09.14		.83		6	38	06.90	38
6	43	45.60	—1.213				.82		6	43	53.21	*39
6	48	01.58	—.990				.82		6	48	09.41	40
6	52	13.98	—1.143	—0	08.81		.81		6	52	21.65	*41
6	56	24.50	—.912				.81		6	56	32.40	42
7	00	50.66	—.183			—0	08.80	+1.80	7	00	59.28	43
7	30	51.82	—.231	—0	05.48	—0	05.69	+1.90	7	30	57.28	*44
7	35	27.58	—.086		05.71		.69		7	35	38.18	45
7	39	30.02	—.515				.68		7	39	35.19	*46
7	43	38.32	—.096				.67		7	43	43.89	*47
7	47	50.62	—.169				.67		7	47	56.12	48
7	56	06.10	—.185				.66		7	56	11.58	49
8	00	40.34	—.408	—0	05.71	—0	05.66	+1.90	8	00	45.59	50

Nos. 1, 10, 13, 16, 35, 39, 41. 44, 47. Two stars in the field.
46 Five stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 13	20 Argus	5.6	—15°19′	5.2	30.5	8 05 55.1	19.8	45.0
2	cont'd.	χ Cancri	6	+27 44	22.5	50.0	8 10 17.0	43.8	11.3
•3		d^1 Cancri	6	+18 50	17.6	43.2	8 14 08.5	33.8	59.3
4		1029 A. S. C.	6	—23 32	13.1	40.0	8 18 05.8	31.5	58.2
5		θ Cancri	5.6	+18 38	34.0	59.6	8 22 25.0	49.8	15.6
6		Moon I	(9.9)	+22 07	16.8	43.7	8 26 10.1	36.4	3.4
•7		39 Cancri	6	+20 34	59.0	25.0	8 30 50.5	16.0	42.0
8		δ Cancri	4.5	+18 44	41.1	6.9	8 35 31.9	57.0	22.8
9		ε Hydræ	4	+ 7 00	26.0	50 5	8 38 14.6	38.5	3.2
10		54 Cancri	6.7	+15 56	13.1	38 5	8 42 03.2	28.0	53.5
11		ρ^4 Cancri	6	+28 32	6.0	34.0	8 46 01.0	28.0	56.0
12		α^2 Cancri	5	+12 28	51.2	16.2	8 49 40 6	5.0	30 2
13	17	χ Leonis	4.5	+ 8 12	2.0	26.5	10 56 50.5	14.5	39.2
14		δ Leonis	3	+21 24			11 05 40.5	6.0	32.3
15		q Leonis	5 6	+ 2 53	20.0	44.4	11 09 08.2	32.0	56.5
16		σ Leonis	4	+ 6 54	9.5	34.0	11 12 58 0	22.0	46.5
17		ι Leonis	4	+11 25	50.5	15.6	11 15 40.0	4.3	28.8
18		τ Leonis	4	+ 3 44	59.1	23.6	11 19 47.4	11.1	35.5
•19		17 Hyd.& Crat.	5.6	—28 23	31.0	58.5	11 24 25.7	53.0	20.5
20		υ Leonis	4.5	+ 0 04	2.2	26.5	11 28 50.4	14.2	38.4
21		92 Leonis	5.6	+22 14	40.6	7.0	11 32 32.7	58.3	24.6
22		ζ Hyd & Crat.	4	—17 28	54.0	19.5	11 36 44.4	9.3	35.0
23		β Leonis	2.3	+15 28	8.6	34.0	11 40 58.7	23.5	49.0
24		β Hyd.& Crat.	4	—33 01	58.0	27.2	11 44 55.6	24.0	53.2
25		Moon I	(14.0)	— 1 00	59.0	24.0	11 48 48.1	12.3	37.3
26		Moon II	(14.0)	— 1 00	5.3	30.2	11 50 54.5	18.8	43.5
27		b Virginis	5.6	+ 4 33			11 51	14.0	38.4
28		ο Virginis	4.5	+ 9 37	19.6	44.4	11 57 08.5	32.5	57.3
29		ε Corvi	4	—21 44	7.5	33.6	12 01 59.3	25.0	51.3
30		γ Corvi	3	—16 39	49.6	15.3	12 07 40.1	4.9	30 5
31		η Virginis	3.4	+ 0 13	0.0	24.5	12 11 48.3	12.0	36.5
32	21	κ Virginis	4	— 9 32	40.0	4.5	14 04 28.8	53.0	17.5
33		α Bootis	1	+20 01	37.2	3.0	14 08 28.2	53.5	19.3
34		λ Virginis	6	—12 38	44.7	10.0	14 10 34.2	58.5	23.7
35		φ Virginis	5	— 1 30	16.3	40.5	14 20 04.3	28.0	52.5
36		ρ Bootis	4.5	+31 04	6.4	31.6	14 25 02.5	30.5	58.6
•37		π Bootis	5	+17 06	28.5	53.8	14 33 18.9	44.0	9.3
38		ε Bootis	3	+27 45	12.5	40.2	14 38 06.5	32.8	0.5
•39		α^2 Libræ	3	—15 22	18.7	44 0	14 42 08.6	33.2	58.5
40		1690 A. S. C.	6.7	—20 40	23.2	49.0	14 48 14.5	39.8	6.0
41		δ Libræ	5	— 7 53	43.5	8.0	14 52 32.1	56.2	20.8
42		ψ Bootis	5	+27 34	47.2	14.5	14 57 42.0	9.5	36.0
43		Moon II	(18.2)	—22 13	27.8	54.6	15 00 21.0	47.4	14.4
44		ι^1 Libræ	5.6	—19 11	22.2	48.0	15 03 13.2	38.5	4.2
45		β Libræ	2.3	— 8 47	42.0	6.5	15 08 30.5	54.6	19.2
46		ϕ^2 Lupi	5	—36 17	4.3	34.4	15 13 04.0	33.5	3.7
47		9 Serpentis	5.6	+16 00	38 3	3.5	15 18 28.3	53.0	18.5
48		γ Lupi	4	—40 37	33.5	5.5	15 24 37.0	8.5	40.5
49		α Cor. Bor.	2	+27 15	7.0	34.1	15 28 01.0	28.0	55.3
50		χ Libræ	5.6	—23 17	4.0	60.5	15 30 56.4	22.2	48.8
51		α Serpentis	2.3	+ 6 56	41.0	5.5	15 36 29.5	53.5	18.0

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
8	05	55.12	— .353			—0	05.65	+1.90	8	06	00.42	1
8	10	16.92	— .091				.64		8	10	22.47	2
8	14	08.48	— .152				.64		8	14	13.97	*3
8	18	05.72	— .406				.63		8	18	10.94	4
8	22	24.80	— .153				.63		8	22	30.28	5
8	26	10.08	— .130				.62		8	26	15.57	6
8	30	50.50	— .141				.62		8	30	55.98	*7
8	35	31 94	— .153				.61		8	35	37.40	8
8	38	14.56	— .223	—0	05 73		.61		8	38	19.95	9
8	42	03.26	— .170				.60		8	42	08.69	10
8	46	01.00	— .086				.60		8	46	06.51	11
8	49	40.64	— .188			—0	05.59	+1.90	8	49	46.04	12
10	56	50.54	— .082			+0	02.40	+1.16	10	56	48.06	13
11	05	40.51	— .052	+0	02.38		.41		11	05	38.05	14
11	09	08.22	— .094				.41		11	09	05.72	15
11	12	58.00	— .085				.41		11	12	55.51	16
11	15	39.84	— .075				.42		11	15	37.35	17
11	19	47.34	— .092				.42		11	19	44.83	18
11	24	25 74	— .168				.42		11	24	23.15	*19
11	28	50.34	— .100				.42		11	28	47.82	20
11	32	32.64	— .049				.42		11	32	30 17	21
11	36	44.44	— .140				.43		11	36	41.87	22
11	40	58.76	— .064	+0	02.46		.43		11	40	56.27	23
11	44	55.60	— .181				.43		11	44	52.99	24
11	48	48.14	— .098				.44		11	48	45.60	25
11	50	54.46	— .098				.44		11	50	51.92	26
11	51	50.16	— .091				.44		11	51	47.63	27
11	57	08.46	— .079				.44		11	57	05.94	28
12	01	59.34	— .150				.45		12	01	56.74	29
12	07	40.08	— .138				.45		12	07	37.49	30
12	11	48.26	— .100			+0	02.46	+1.16	12	11	45.70	31
14	04	28.76				+0	04.17	+0.44	14	04	24.59	32
14	08	28.24		+0	03.95		.17		14	08	24.07	33
14	10	34.22					.17		14	10	30.05	34
14	20	04.32					.17		14	20	00.15	35
14	25	02.52					.17		14	24	58.35	36
14	33	18.90					.18		14	33	14.72	*37
14	38	06.50			04.20		.18		14	38	02.32	38
14	42	08.60			04.22		.18		14	42	04.42	*39
14	48	14.50					.18		14	48	10.32	40
14	52	32.12					.18		14	52	27.94	41
14	57	41,84					.18		14	57	37.66	42
15	00	21.04					.18		15	00	16.86	43
15	03	13.22					.18		15	03	09.04	44
15	08	30.56			04.30		.18		15	08	26.38	45
15	13	03.98					.18		15	12	59.80	46
15	18	28.32					.18		15	18	24.14	47
15	24	37.00					.18		15	24	32.82	48
15	28	01.08			04.22		.19		15	27	56.89	49
15	30	56.38					.19		15	30	52.19	50
15	36	29.50		+0	04.20	+0	04.19	+0 44	15	36	25.31	51

No. 3, 39. Two stars in the field of the instrument.
7. Six stars in the field.
19. A double star.
37. A double star; each of the 5th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 27	α Canis Maj.	1	−16°30′	24.0	49.3	6 38 14.2	39.0	4.5
2		ε Canis Maj.	2.3	−28 45	33.6	1.7	6 52 28.8	56.0	23.8
3		γ Canis Maj.	4	−15 24	49.5	15.0	6 56 39.5	4.1	29.5
4		τ Geminorum	5	+30 30	9.6	38.0	7 01 05.6	33.1	1.5
*5		m Monocerotis	4.5	− 0 14	1.6	26.1	7 03 50.0	13.9	38.0
6		δ Geminorum	3.4	+22 16	50.3	16.8	7 10 42.4	9.0	34.4
7		ι Geminorum	4	+28 07	1.0	28.6	7 15 55.6	22 6	50.3
8		ο Canis Min.	5.6	+12 20	12.5	37.4	7 21 01.9	26.4	51.2
9		υ Geminorum	5	+27 15	18.0	45.5	7 26 12.3	39.0	6.4
*10		α Canis Min.	1.2	+ 5 38	15.5	40.0	7 31 04.0	27.9	52.2
11		β Geminorum	2	+28 24	45.1	13.0	7 35 40.0	7.0	34.7
*12		c Arg. in pup.	4	−37 35	41.0	11.8	7 39 42.0	12.0	42.6
*13	29	1044 A. S. C.	6	+ 7 10	42.5	7.0	8 27 30.9	54.8	19.3
14		1049 A. S. C.	6.7	+20 06	59.0	25.0	8 30 50.3	15.6	41.5
15		γ Cancri	5	+22 02	20.0	46.3	8 34 12.0	37.4	3.8
16		ε Hydræ	4	+ 7 00	40.0	4.6	8 38 28.6	52.5	17.2
17		α^2 Cancri	5	+12 28	5.3	30.3	8 49 54.5	18.8	44.0
18	31	ω^1 Cancri	6	+25 49	24.7	2.0	7 51 28.4	54.8	21.8
19		6 Cancri	5.6	+28 14	0.5	27.9	7 53 54.9	21.9	49.4
20		15 Argus	3.4	−23 51	4.6	31.4	8 00 57.3	23.3	50.1
21		19 Argus	6	−12 27	10.0	35.0	8 03 59.5	24.0	48.5
22		β Cancri	4	+ 9 40	15.0	39.5	8 08 04.0	28.0	52.7
23		q Arg. in pup.	4.5	−36 10	48.0	18.2	8 12 47.8	17.5	47.5
24	April 3	υ Geminorum	5	+27 15	27.0	54.5	7 26 21.3	48.0	15.5
25		α Canis Min.	1.2	+ 5 38	24.6	49.0	7 31 13.1	37.0	1.5
26		β Geminorum	2	+28 24	54.3	22.0	7 35 49.0	16.0	43 8
27		c Arg. in pup.	4	−37 35	50.0	21.0	7 39 51.0	21.0	51.6
*28		ξ Argus	4	−24 28			7 42 51.6	17.6	44.4
29		1 Cancri	6	+16 13	21.8	47.3	7 48 12.1	36.8	2.2
30		ω^1 Cancri	6	+25 49	39.0	6.2	7 51 32.7	59.0	26.0
*31		6 Cancri	5 6	+28 14	4.5	32.0	7 53 59.0	26.0	53.5
32		15 Argus	3.4	−23 51	8.6	35.5	8 01 01.6	27.7	54.3
33	4	υ Geminorum	5	+27 15	27.0	54.4	7 26 21.3	48.1	15.5
34		α Canis Min.	1.2	+ 5 38	24.6	49.2	7 31 13.1	37.0	1.4
35		β Geminorum	2	+28 24	54.2	22.0	7 35 49.0	16.0	43.6
36		c Arg. in pup.	4	−37 35	50.2	21.0	7 39 51.0	21.0	51.8
*37		ξ Argus	4	−24 28	58.6	25.5	7 42 51.5	17.5	44.5
38		1 Cancri	6	+16 13	21.9	47.2	7 48 12.0	36.8	2 2
39		ω^1 Cancri	6	+25 49	39.0	6.2	7 51 32.5	58.8	26.0
40		6 Cancri	5.6	+28 14	4.3	32.0	7 53 59.0	26.0	53.8
41		15 Argus	3.4	−23 51	8.9	35.5	8 01 01.5	27.5	54.0
42	8	ε Canis Maj.	2.3	−28 45	49.5	16.8	6 52 43.9	11.0	38.5
43		δ Canis Maj.	3.4	−26 08	23.0	50.0	7 02 16.7	43.2	10.2
44		Moon I	(6.3)	+26 35	32.7	0.3	7 07		
45		ι Geminorum	4	+28 07	16.0	43.6	7 16 10.5	37.5	5.0
46		α Canis Min.	1.2	+ 5 38	30.5	55.0	7 31 18.9	42.8	7.3
47		β Geminorum	2	+28 24	0.0	27.7	7 35 54.7	21.7	49.3

April 8.—Cumuli passing rapidly.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
6	38	14.20	— .601	+0	06.68	+0	06.70	+0.95	6	38	06.90	1
6	52	28.78	— .738		06.71		.71		6	52	21.33	2
6	56	39.52	— .589				.71		6	56	32.22	3
7	01	05.56	— .111				.72		7	00	58.73	4
7	03	49.92	— .441				.72		7	03	42.76	*5
7	10	42.38	— .216		06.69		.72		7	10	35.44	6
7	15	55.62	— .148				.72		7	15	48.75	7
7	21	01.88	— .321				.72		7	20	54.84	8
7	26	12.24	— .159				.73		7	26	05.35	9
7	31	03.92	— .386		06.66		.73		7	30	56.80	*10
7	35	39.96	— .144	+0	06.85		.73		7	35	33.09	11
7	39	41.88	— .858			+0	06.74	+0.95	7	39	34.28	*12
8	27	30.90				+0	08.67	+1.30	8	27	22.23	*13
8	30	50.28					.68		8	30	41.60	14
8	34	11.90					.68		8	34	03.22	15
8	38	28.58		+0	08.68		.68		8	38	19.90	16
8	49	54.58				+0	08.69	+1.30	8	49	45.89	17
7	51	28.34				+0	11.99	+1.51	7	51	16.35	18
7	53	54.92					12.00		7	53	42.92	19
8	00	57.34		+0	12.00		.00		8	00	45.34	20
8	03	59.40					.00		8	03	47.40	21
8	08	03.84					.00		8	07	51.84	22
8	12	47.80				+0	12.01	+1.51	8	12	35.79	23
7	26	21.26	— .068			+0	16.07	—0.03	7	26	05.12	24
7	31	13.04	— .165	+0	16.12		.07		7	30	56.81	25
7	35	49.02	— .061		16.13		.07		7	35	32.89	26
7	39	50.92	— .368				.07		7	39	34.48	27
7	42	51.56	— .295				.07		7	42	35.20	*28
7	48	12.02	— .120				.07		7	47	55.83	29
7	51	32.58	— .075				.07		7	51	16.44	30
7	53	59.00	— .062				.07		7	53	42.87	*31
8	01	01.54	— .292	+0	15.96	+0	16.07	—0.03	8	00	45.18	32
7	26	21.26	— .068			+0	16.04	+0.00	7	26	05.15	33
7	31	13.06	— .165	+0	16.14		.04		7	30	56.86	34
7	35	48.96	— .061		16.07		.04		7	35	32.86	35
7	39	51.00	— .368				.04		7	39	34.59	36
7	42	51.52	— .295				.04		7	42	35.19	*37
7	48	12.02	— .120				.04		7	47	55.86	38
7	51	32.50	— .075				.04		7	51	16.39	39
7	53	59.02	— .062				.04		7	53	42.92	40
8	01	01.48	— .292	+0	15.92	+0	16.04	+0.00	8	00	45.15	41
6	52	43.94	—1.195	+0	21.68	+0	21.64	+1.00	6	52	21.11	42
7	02	16.62	—1.146				.65		7	01	53.82	43
7	07	27.60	— .270				.65		7	07	05.68	44
7	16	10.52	— .239				.65		7	15	48.63	45
7	31	18.90	— .624		21.60		.66		7	30	56.62	46
7	35	54.68	— .234	+0	21.68	+0	21.66	+1.00	7	35	32.79	47

No. 5. A star precedes *m* Monocerotis 6*s*.
13. A fine double star; one of the 6th and one of the 7th magnitude.
10, 28, 31, 37. Two stars in the field of the instrument.
12. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 10	d^1 Cancri	6	+18°50′	45.5	11.2	8 14 36.3	1.4	27.1
*2		1029 A. S. C.	6	—23 32	41.3	7.9	8 18 33.8	59.8	26.3
3		θ Cancri	5.6	+18 38	1.7	27.5	8 22 52.7	17.8	43.4
*4		1044 A. S. C.	6	+ 7 10	56.5	21.0	8 27 45.1	9.0	33.4
*5		1049 A. S. C.	6.7	+20 06	13.0	39.0	8 31 04.3	29.6	55.5
6		δ Cancri	4.5	+18 44	9.0	34.6	8 35 59.9	25.2	50.8
7		ε Hydræ	4	+ 7 00	54.0	18.6	8 38 42.6	6.6	31.0
8		γ Pixid. Naut	5.6	—27 07	15.3	42.6	8 44 09.2	36.0	3.4
9		σ^1 Cancri	6	+15 56	53.7	19.0	8 48 43.9	8.7	34.0
10		ν Cancri	6	+25 05	54.2	21.0	8 53 47.3	13 5	40.4
11		ω Hydræ	6	+ 5 44	9.0	33.8	8 57 57.7	21.5	46.0
*12		1112 A. S. C.	5.6	—25 13	33.1	0.0	9 01 26.4	52.8	19.6
13		Moon I	(8.4)	+18 41	44.3	10.5	9 05 36.2	1.9	28.1
14		q Cancri	6.7	+18 23	36.8	2.5	9 10 27.6	52.7	18.3
15		κ Leonis	5	+26 52	50.5	18.0	9 15 44.5	11.0	38 5
16		α Hydræ	2	— 7 58	19.8	44.2	9 20 08.2	32.2	57.0
17		λ Leonis	4.5	+23 40	7.5	34.0	9 23 00 0	26.0	52.5
18		33 Hydræ	6	— 5 12	10.0	34.5	9 26 58.5	22.5	47.0
19		ο Leonis	4	+10 37	12.3	37.0	9 33 01.2	25.5	50.3
20		ε Leonis	3	+24 30	17.6	44.6	9 37 10.8	37.0	4.2
21	12	ζ Leonis	4.5	+24 13	21.0	48.0	10 08 14.0	40.1	7.0
22		γ Leonis	2	+20 39	44.2	10.3	10 11 35.7	1.0	27.2
23		r Arg. in vel.	4.5	—40 51	52.1	24.0	10 15 55.7	27.4	59.2
24		40 Leonis Min.	5.6	+27 10	47.2	14.8	10 34 41.5	8.2	35.0
25		Moon I	(10.4)	+ 7 16	38.8	3.8	10 46 28.2	52 6	17.5
26		χ Leonis	4.5	+ 8 12	24.5	49.1	10 57 13.0	37.1	1.6
27		δ Leonis	3	+21 24	11.1	37.4	11 06 03.0	28.6	54.6
28		q Leonis	5.6	+ 2 53	42.6	7.0	11 09 30.8	54.5	19.0
29		δ Hyd. & Crat.	3.4	—13 55	58.6	23.5	11 11 48.3	13.0	38.0
30	13	χ Leonis	4.5	+ 8 12	25.7	50.0	10 57 14.1	38.1	2.6
31		10 Hyd & Crat	6	—27 13	34.6	2.2	11 01 29.1	56.0	23.0
32		δ Leonis	3	+21 24	12.6	38.5	11 06 04.1	29.6	56.0
33		q Leonis	5.6	+ 2 53	44.0	8.2	11 09 32.0	55.9	20.3
34		δ Hyd. & Crat.	3.4	—13 55	59.9	25.0	11 11 49.5	14.0	39.0
35		ι Leonis	4	+11 25	14.3	39.1	11 16 03.5	28.0	52.8
*36		τ Leonis	4	+ 3 44	23.0	47.5	11 20 11.4	35.1	59.6
*37		17 Hyd. & Crat	6	—28 23	55.5	23.0	11 24 50.0	17.0	44.5
*38		1359 A. S. C.	6	+28 40	26.0	53.9	11 28 20.9	47.9	15.8
39		Moon I	(11.5)	+ 1 08	12.0	37.0	11 33 01.2	25.5	50.5
40		ζ Hyd. & Crat.	4	—17 28	18.0	43.5	11 37 08.6	33.5	59.0
41		β Virginis	3.4	+ 2 40	2.2	26.8	11 42 50.4	14.0	38.7
42		A Virginis	6	+ 9 20	30.5	55.0	11 47 19.3	43.5	8.1
43		b Virginis	5.6	+ 4 33	26.0	50.2	11 52 14.0	37.8	2.2
44	15	η Virginis	3.4	+ 0 13	26.3	50.6	12 12 14 5	38.2	2.6
*45		c Comæ Ber.	5	+26 44	4.6	32.0	13 14 58 7	25.0	52.6
46		a Comæ Ber.	5.6	+27 43	35.9	3.2	12 19 30.1	57.2	24 5
*47		δ Corvi	3	—15 37	17.0	42.2	12 22 07.0	31.8	57.0
48		q Virginis	5.6	— 8 31	14.2	39.0	12 26 03.0	27.0	51.8
49		d Hyd. & Crat.	5.6	—26 15	52.0	19.0	12 29 45.5	12.0	39.0
50		γ^1 Virginis	4	— 0 34	16.6	41.0	12 34 04.8	28.6	53.0

April 12.—Occasional clouds interrupted observation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
8	14	36.30				+0	22.92	+0.76	8	14	13.38	1
8	18	33.82					.92		8	18	10.90	*2
8	22	52.62					.92		8	22	29.70	3
8	27	45.00					.92		8	27	22.08	*4
8	31	01.28					.92		8	30	41.36	*5
8	35	59.90					.93		8	35	36.97	6
8	38	42.56		+0	22.83		.93		8	38	19.63	7
8	44	09.30					.93		8	43	46.37	8
8	48	43.86					.93		8	48	20.93	9
8	53	47.28					.94		8	53	24.34	10
8	57	57.60					.94		8	57	34.66	11
9	01	26.38					.94		9	01	03.44	*12
9	05	36.20					.94		9	05	13.26	13
9	10	27.58					.94		9	10	04.64	14
9	15	44.50					.94		9	15	21.56	15
9	20	08.28			23.00		.94		9	19	45.34	16
9	23	00.00					.94		9	22	37.06	17
9	26	58.50					.94		9	26	35.56	18
9	33	01.26					.95		9	32	38.31	19
9	37	10.84		+0	22.99	+0	22.95	+0.76	9	36	47.89	20
10	08	14.02	— .172			+0	24.72	+1.04	10	07	49.13	21
10	11	35.68	— .207				.72		10	11	10.75	22
10	15	55.68	— .306				.72		10	15	30.15	23
10	34	41.34	— .141				.73		10	34	16.47	24
10	46	28.18	— .328				.74		10	46	03.11	25
10	57	13.06	— .319				.74		10	56	48.00	26
11	06	02.94	— .199	+0	24.74		.75		11	05	37.99	27
11	09	30.78	— .365				.75		11	09	05.67	28
11	11	48.28	— .500	+0	24.76	+0	24.75	+1.04	11	11	23.03	29
10	57	14.10	— .319			+0	25.95	+1.25	10	56	47.83	30
11	01	28.98	— .638				.96		11	01	02.38	31
11	06	04.16	— .199	+0	25.96		.96		11	05	38.00	32
11	09	32.08	— .365				.96		11	09	05.76	33
11	11	49.48	— .500	+0	25.96		.96		11	11	23.02	34
11	16	03.54	— .291				.96		11	15	37.29	35
11	20	11.32	— .357				.97		11	19	44.99	*36
11	24	50.00	— .650				.97		11	24	23.38	*37
11	28	20.90	— .125				.97		11	27	54.81	*38
11	33	01.24	— .379				.98		11	32	34.88	39
11	37	08.62	— .541				.98		11	36	42.00	40
11	42	50.42	— .367				.98		11	42	24.07	41
11	47	19.28	— .307				.99		11	46	52.98	42
11	52	14 04	— .351			+0	25 99	+1.25	11	51	47.70	43
12	12	14.44	— .500			+0	28.51	+0.83	12	11	45.43	44
12	14	58 58	— .188				.51		12	14	29.88	*45
12	19	30.18	— .174				.51		12	19	01.50	46
12	22	07.00	— .677				.51		12	21	37.81	*47
12	26	03.00	— .595				.51		12	25	33.90	48
12	29	45.50	— .809				.52		12	29	16.17	49
12	34	04.80	— .508			+0	28.52	+0.83	12	33	35.77	50

No. 2, 12, 38, 45, 47. Two stars in the field of the instrument.
4. A fine double star; one estimated of the 6th, and the other of the 7.8 magnitude.
5. Twelve stars in the field.
36. Three stars in the field.
37. A double star; each estimated 6th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 15	33 Virginis	6	+10°26′	57.0	22.0	12 38 46 1	10.3	35.0
2	cont'd.	30 Comæ Ber.	6	+28 25	6.0	33.8	12 42 01.0	28.0	55.8
3		*q* Comæ Ber.	5	+22 07	4.0	30.3	12 45 56.1	21.8	48.1
4		*r* Comæ Ber.	4.5	+18 16	41.2	7.0	12 51 32.0	57.0	22.8
5		ε Virginis	3.4	+11 49	55.0	19.8	12 54 44.2	8.5	33.3
6		*t* Comæ Ber.	6	+22 01	12.8	39.0	12 59 04.6	30.2	56.5
7		Moon I	(13.5)	—10 36	30.1	55.6	13 04 20.3	45.0	10.5
8		*e* Virginis	6	+10 16	32.5	57.2	13 09 21.3	45.5	10.2
9		ι Centauri	3	—35 52	10.2	40.0	13 12 09.6	39.0	9.0
10		α Virginis	1	—10 19	29.0	54.0	13 17 18.0	42.0	7.0
11		*i* Virginis	5	—11 52	59.0	24.0	13 18 48.1	12.2	37.0
12	16	ε Virginis	3.4	+11 49	55.8	20.5	12 54 45.0	9.3	34.0
13		*t* Comæ Ber.	6	+22 01	13.4	39.5	12 59 15.3	31.0	57.2
14		53 Virginis	5	—15 20	16.0	41.0	13 04 05.6	30.2	55.2
15		*e* Virginis	5.6	+10 16	33.3	58.0	13 09 22.2	46.5	11.0
16		ι Centauri	3	—35 52	11.0	41.0	13 12 10.3	39.5	9.5
17		α Virginis	1	—10 10	29.5	54.3	13 17 18.5	42.7	7.5
18		*i* Virginis	5.6	—11 52	59.5	24.5	13 18 48.7	13.0	38.0
19		*d* Centauri	4	—38 34	19.0	50.0	13 22 20.4	50.8	22.0
20		78 Virginis	6	+ 4 29	46.0	10.2	13 26 34.0	57.8	22.0
21		*t* Centauri	6	—28 44	21.5	49.0	13 30 16.5	44.8	11.2
22		2 Bootis	6	+23 19	7.7	34.3	13 34 00.3	26.2	52.6
23		85 Virginis	6.7	—14 58	41.0	6.2	13 37 31.0	55.8	21.0
24		*x* Virginis	5.6	—17 20	53.2	18.8	13 41 43.7	8.6	34.1
25		η Bootis	3	+19 12	45.0	10.8	13 47 36.1	1.4	27.0
26		*l* Bootis	5	+28 17	53.2	21.0	13 49 48.0	15.0	42.7
27		Moon II	(14.6)	—16 02	26.6	52.5	13 53 18 0	43.5	9.3
28		θ Centauri	2	—35 35	51.0	21.0	13 57 50.2	19.5	49.5
29		1610 A. S. C.	6	—15 33	49.0	14.5	14 02 39.2	4.0	29.2
30		α Bootis	1	+20 01	2.6	28.5	14 08 54.1	19.4	45.3
31		λ Virginis	4.5	—12 38	10.5	35.5	14 11 00.1	24.5	49.5
32	17	*l* Bootis	5	+28 17	53.8	21.5	13 49 48.5	15.5	43.2
33		θ Centauri	2	—35 35	51.5		13 57 51.0	20.0	
34		1610 A. S. C.	6	—15 33	50.0	15.3	14 02 39.9	4.5	29.8
35		α Bootis	1	+20 01	3.5	29.3	14 08 54.8	20.2	46.0
36		λ Virginis	4.5	—12 38	11.1	36.2	14 11 00.6	25.0	50.0
37		2 Libræ	6	—10 59	33.5	58.2	14 15 22.5	46.8	11.5
38		8 Hydræ Con.	5.6	—28 46	27.6	55.5	14 19 22.7	49.9	17.5
39		ρ Bootis	4.5	+31 04	32.6	1.0	14 25 28.8	56.5	25.0
40		σ Bootis	5	+30 27	19.8	48.0	14 28 15.5	43.1	11.5
41		μ Virginis	4.5	— 4 57	22.8	47.0	14 35 11.0	35.0	59.5
42		ε Bootis	3	+27 45	38.2	5.6	14 38 32.6	59.5	27.0
43		Moon II	(15.6)	—20 37	7.8	34.5	14 42 00.7	26.8	53.5
44		ξ¹ Libræ	6	—11 14	26.0	51.0	14 46 15.3	39.5	4.2
45		20 Libræ	3.4	—24 39	23.5	50.3	14 55 16.5	42.7	9.5
46	18	μ Virginis	4.5	— 4 57	22.8	47.2	14 35 11.1	35.0	59.6
47		ε Bootis	3	+27 45	38.5	6.0	14 38 33.0	59.9	27.3
*48		α² Libræ	3	—15 22	45.6	10.8	14 42 35.6	0.1	25.5
49		ξ¹ Libræ	6	—11 14	26.5	51.0	14 46 15.5	39.8	4.3
50		1690 A. S. C.	6	—20 40	50.0	16.0	14 48 41.5	7.0	33.0

April 18.—The observations were interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
12	38	46.08	— .707			+0	28.52	+0.83	12	38	16.85	1
12	42	00.92	— .185				.52		12	41	32.22	2
12	45	56.06	— .249				.53		12	45	27.28	3
12	51	32.00	— .297				.53		12	51	03.17	4
12	54	44.16	— .372				.53		12	54	15.26	5
12	59	04.62	— .250				.53		12	58	35.84	6
13	04	20.30	— .618				.54		13	03	51.14	7
13	09	21.34	— .390				.54		13	08	52.41	8
13	12	09.56	— .952				.54		13	11	40.07	9
13	17	18.00	— .616	+0	28.54		.54		13	16	48.84	10
13	18	48.06	— .632			+0	28.54	+0.83	13	18	18.89	11
12	54	44.92	— .372			+0	29.04	+0.58	12	54	15.51	12
12	59	05.28	— .250				.04		12	58	35.99	13
13	04	05.60	— .618				.05		13	03	35.93	14
13	09	22.20	— .390				.05		13	08	52.76	15
13	12	10.26	— .952				.05		13	11	40.26	16
13	17	18.50	— .616	+0	29.03		.05		13	16	48.84	17
13	18	48 74	— .632				.05		13	18	19.06	18
13	22	20.44	— .998				.05		13	21	50.39	19
13	26	34.00	— .453				.06		13	26	04.49	20
13	30	16.60	— .844				.06		13	29	46.70	21
13	34	00.22	— .234				.06		13	33	30.93	22
13	37	31.00	— .669				.06		13	37	01.27	23
13	41	43.68	— .697				.06		13	41	13.92	24
13	47	36 06	— .285		29.06		.06		13	47	06.72	25
13	49	47.98	— .185				.06		13	49	18.74	26
13	53	17.98	— .682				.06		13	52	48.24	27
13	57	50.21	— .950				.06		13	57	20.23	28
14	02	39 18	— .675				.06		14	02	09.45	29
14	08	53.98	— .215	+0	29.10		.06		14	08	24.68	30
14	11	00.02	— .612			+0	29.07	+0.58	14	10	30.31	31
13	49	48.50	— .185			+0	29.75	+0.46	13	49	18.57	32
13	57	50.89	— .950				.75		13	57	20.19	33
14	02	39.90	— .675				.76		14	02	09.47	34
14	08	54.76	— .245	+0	29.87		.76		14	08	24.76	35
14	11	00.58	— .642				.76		14	10	30.18	36
14	15	22.50	— .623				.76		14	14	52.12	37
14	19	22.64	— .844				.76		14	18	52.04	38
14	25	28.78	— .127				.76		14	24	58.89	39
14	28	15.58	— .135				.76		14	27	45.69	40
14	35	11.06	— .556				.76		14	34	40.74	41
14	38	32.58	— .174	+0	29.66		.76		14	38	02.65	42
14	42	00.66	— .737				.76		14	41	30.16	43
14	46	15.20	— .626				.76		14	45	44.81	44
14	55	16.50	— .789			+0	29.77	+0.46	14	54	45.93	45
14	35	11.14	— .501			+0	30.04	+0.40	14	34	40.60	46
14	38	32.94	— .157	+0	30.02		.04		14	38	02.74	47
14	42	35.52	— .606		30.02		.04		14	42	04.87	*48
14	46	15.42	— .564				.04		14	45	44.82	49
14	48	41.50	— .663			+0	30.04	+0.40	14	48	10.80	50

No. 48. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	April 18	20 Libræ	3 4	—24°39′	23.7	50.5	14 55 16.8	43.0	19.7
*2	cont'd.	ν² Libræ	6.7	—15 51	57.0	2.0	14 58 27.0	51.5	17.0
3		ι¹ Libræ	5.6	—19 11	49.0	15.0	15 03 40.1	5.2	31.0
4		β Libræ	2.3	— 8 47	8.6	33.3	15 08 57.5	21.6	46.2
5		υ Libræ	6	—17 34	32.5	58.3	15 12 23.3	48.2	13.8
6		ε Libræ	5.6	— 9 44			15 16 04.2	29.0	54.0
7		10 Serpentis	5.6	+ 2 24	18.3	42.9	15 21 06.6	30.2	54.8
8	19	α Serpentis	2.3	+ 6 56	8.5	33.0	15 36 57.0	21.0	45.3
9		*b* Scorpii	5	—25 15	3.2	30.2	15 41 56.5	22.7	49.5
*10		A¹ Scorpii	5	—24 51	42.2	9.0	15 44 35.1	1.2	28.2
11		ρ Scorpii	4	—28 44	40.5	8.2	15 47 35.4	2.6	30.5
12		δ Scorpii	3	—22 09	35.2	1.6	15 51 27.1	52.7	19.1
*13		β¹ Scorpii	2	—19 22	51.5	17.5	15 56 42.6	7.7	33.7
*14		*g*¹ Serpentis	6	+10 19	43.8	8.5	16 00 32.8	57.0	21.7
15		δ Ophiuchi	3	— 3 16	43.5	8.0	16 06 31.7	55.5	20.0
16		*d* Scorpii	5.6	—28 12	3.0	30.7	16 08 57.5	24.5	52.0
17		γ Herculis	3.4	+19 32	34.0	0.0	16 15 25.0	50.0	16.2
18		α Scorpii	1	—26 04	17.2	44.2	16 20 10.7	37.2	4.2
19		Moon II	(17.6)	—26 49	16.8	44.7	16 26 12.1	39.5	7.3
20		τ Scorpii	3.4	—27 52	36.0	3.8	16 26 30.5	57.2	24.9
21		ε Scorpii	3	—34 00	25.0	54.2	16 40 23.0	51.5	21.2
22		*s* Herculis	5 6	+30 05	2.0	30.3	16 44 57.6	24.9	53.2
23		ε Herculis	3	+31 10	47.0	15.5	16 54 43.3	11.0	39.5
24		λ Scorpii	3	—36 56	19.5	50.0	17 23 19.8	49.5	20.0
25		α Ophiuchi	2	+12 41	14.5	39.6	17 28 03.8	28.0	53.0
26		β Ophiuchi	3	+ 4 38	19.0	43.5	17 36 07.4	31.3	55.7
27		μ Herculis	4	+27 49	50.5	18.0	17 40 44.9	11.7	39.2
28	20	α Scorpii	1	—26 04	18.7	45.6	16 20 12.0	38.5	5 5
29		τ Scorpii	3.4	—27 52	37.2	5.0	16 26 32.0	59.0	26.8
30		33 Herculis	7	+ 7 26	51.5	16.5	16 29 40.5	4.5	29.0
31		1908 A. S. C.	6	—28 12	41.5	9.0	16 35 36.0	3.0	30.8
32		ε Scorpii	3	—34 00	26.5	56.0	16 40 24.8	53.5	23.0
33		*s* Herculis	5.6	+30 05	3.6	31.8	16 44 59.1	26.5	54.8
34		κ Ophiuchi	4	+ 9 38	52.0	16.8	16 50 40.9	5.0	29.8
35		ε Herculis	3	+31 10	48.8	17.1	16 54 44.9	12.6	41.0
36		60 Herculis	5	+12 58	43.0	8.0	16 58 32.5	57.0	22.0
37		η Ophiuchi	2.3	—15 31	57.7	23.0	17 01 47.8	12.6	37.8
*38		α Herculis	3.4	+14 35	6.3	31.5	17 07 56.0	20.5	45.8
39		ρ Ophiuchi	5	—20 56	9.0	35.0	17 12 00.7	26.3	52.2
40		1990 A. S. C.	6	—21 17	52.0	18.0	17 15 43.7	9.2	35.3
41		Moon II	(18.7)	—28 03	12.0	40.5	17 21 08.3	36.2	4.7
42		λ Herculis	4.5	+26 14	57.2	24.6	17 24 51.0	17.5	44.9
43		α Ophiuchi	2	+12 41	16.0	41.0	17 28 05.4	29.8	54.8
44		κ Scorpii	3	—38 56	59.8	31.0	17 32 01.6	32.2	3.5
45		3 Sagittarii	5	—27 46	11.0	38.3	17 38 05.2	32.0	59.5
46		μ Herculis	3.4	+27 49	52.0	19.6	17 40 46.5	13.3	41.0
47		ν Ophiuchi	4	— 9 45	59.4	24.0	17 50 48.2	12.3	37.0
48		γ² Sagittarii	4	—30 25	12.0	40.0	17 56 07.6	35.2	3.5
49		2085 A. S. C.	5	—28 28	38.0	5.7	17 58 32.8	59.9	27.5
50	27	*a* Comæ Ber.	4.5	+27 43	48.8	16.4	12 19 43.2	10.0	37.7

April 19.—☽ ☌ τ Scorpii.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
14 55 16.74	— .710		+0 30.04	+0.40	14 54 45.99	1
14 58 26.90	— .611		.04		14 57 56.35	*2
15 03 40.06	— .647		.04		15 03 09.37	3
15 08 57.44	— .539	+0 30.07	.04		15 08 26.86	4
15 12 23.22	— .599		.04		15 11 52.58	5
15 16 04.53	— .548		.04		15 15 33.94	6
15 21 06.56	— .428		+0 30.05	+0.40	15 20 36.08	7
15 36 56.96	— .501	+0 30.53	+0 30.59	+1.14	15 36 25.87	8
15 41 56.42	— .935		.60		15 41 24.89	9
15 44 35.14	— .929		.60		15 44 03.61	*10
15 47 35.44	— .991		.60		15 47 03.85	11
15 51 27.14	— .888		.61		15 50 55.64	12
15 56 42.60	— .847	30.58	.61		15 56 11.14	*13
16 00 32.76	— .457		.61		16 00 01.69	*14
16 06 31.74	— .632	30.64	.62		16 06 00.49	15
16 08 57.54	— .983		.62		16 08 25.94	16
16 15 25.04	— .331		.62		16 14 54.09	17
16 20 10.70	— .948	30.62	.62		16 19 39.13	18
16 26 12.08	— .961		.62		16 25 40.50	19
16 26 30.48	— .978		.63		16 25 58.87	20
16 40 22.98	—1.084		.63		16 39 51.27	21
16 44 57.60	— .166		.64		16 44 26.79	22
16 54 43.26	— .147		.65		16 54 12.46	23
17 23 19.76	—1.139		.67		17 22 47.95	24
17 28 03.78	— .426	+0 30.73	.67		17 27 32.68	25
17 36 07.38	— .530		.68		17 35 36.17	26
17 40 44.86	— .204		+0 30.68	+1.14	17 40 13.98	27
16 20 12.06	— .685	+0 32.28	+0 32.28	+1.65	16 19 39.10	28
16 26 32.00	— .707		.28		16 25 59.01	29
16 29 40.40	— .358		.29		16 29 07.75	30
16 35 36.06	— .711		.30		16 35 03.05	31
16 40 24.76	— .784		.30		16 39 51.68	32
16 44 59.16	— .120		.31		16 44 26.73	33
16 50 40.90	— .337		.31		16 50 08.25	34
16 54 44.88	— .107		.32		16 54 12.45	35
16 58 32.50	— .305		.32		16 57 59.88	36
17 01 47.78	— .537		.32		17 01 14.92	37
17 07 56.02	— .289	32 27	.33		17 07 23.40	*38
17 12 00.64	— .630		.33		17 11 27.68	39
17 15 43.64	— .633		.34		17 15 10.67	40
17 21 08.34	— .709		.34		17 20 35.29	41
17 24 51.04	— .166		.35		17 24 18.52	42
17 28 05.40	— .307	+0 32.45	.35		17 27 32.74	43
17 32 01.62	— .860		.36		17 31 28.40	44
17 38 05.20	— .705		.37		17 37 32.13	45
17 40 46.48	— .138		.37		17 40 13.97	46
17 50 48.18	— .517		.38		17 50 15.28	47
17 56 07.66	— .738		.39		17 55 34.53	48
17 58 32.78	— .714		+0 32 39	+1.65	17 57 59.68	49
12 19 43.22			+0 41.98	+1.64	12 19 01.24	50

Nos. 2, 10, 13, 14, 38. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 27	δ Corvi	3	—15°37′	30.3	55.5	12 22 20.3	44.8	10.0
2	cont'd.	β Corvi	2.3	—22 31	52.0	18.3	12 26 44.1	9.9	36.2
3		d Hyd. & Crat.		—26 15	5.0	32.1	12 29 58.6	25.0	52.3
4		γ^1 Virginis	4	— 0 34	29.5	54.0	12 34 17.8	41.5	6.0
5		55 Virginis	6	—19 05	31.5	57.3	13 06 22.4	47.5	13.2
6		ι Centauri	3	—35 52	23.0	53.2	13 12 22.7	52.0	22.2
7		α Virginis	1	—10 19	42.1	6.7	13 17 30.8	35 0	19.7
8	May 6	β Virginis	3.4	+ 2 40	35.0	59.2	11 43 23.1	47.0	11.2
9		γ Corvi	3	—16 39	46.5	12.0	12 08 36.7	1.2	27.0
10		n Virginis	6	+ 0 06	41.6	6.0	12 11 29.7	53.5	18.0
11		η Virginis	3.4	+ 0 13			12 12 45.0	8.7	33.0
12		f Comæ Ber.	5.6	+26 59	24.0	51.3	12 17 18.1	44.9	12.0
13		α Comæ Ber.	5	+27 43	6.5	33.5	12 20 00.3	27.1	54.0
14		δ Corvi	3	—15 37	47.0	12.5	12 22 37.0	1.6	27.2
15		β Corvi	2.3	—22 31	9.1	35.6	12 27 01.3	27.0	53.5
16		γ^1 Virginis	4	— 0 34	47.0	11.0	12 34 34.9	58.8	23.2
17		p Centauri	6	—43 08	5.6	34.8	12 43 03.3	31.8	1.0
18	7	β Corvi	2.3	—22 31	11.0	37.3	12 27 03.2	29.0	55.3
19		d Hyd. & Crat.	5.6	—26 15	24.0	51.0	12 30 17.6	44.2	11.1
20		γ^1 Virginis	3.4	— 0 34	48.8	13.1	12 34 36.9	0.7	25.0
21		n Comæ Ber.	6	+17 27	52.0	17.3	12 39 42.4	7.5	33.0
22		p Comæ Ber.	5.6	+28 25	2.7	30.2	12 44 57.3	24.5	52.0
23		δ Virginis	3.4	+ 4 16	48.0	12.3	12 48 36.1	0.0	24.5
*24		u Comæ Ber.	4	+28 29	38.6	6.2	13 00 33.3	0.4	28.0
25		θ Virginis	4.5	— 4 41	55.5	20.0	13 02 43.8	7.5	32.0
26		55 Virginis	6	—19 05	50.5	16.5	13 06 41.5	6.5	32.5
27		ι Centauri	3	—35 52	42.0	12.0	13 12 41.4	10 8	40.7
28		α Virginis	1	—10 19	1.0	25.6	13 17 50.1	14.6	39.0
29	10	ρ Leonis	4	+10 08	41.3	6.0	10 25 30.0	54.0	18.7
30		ϕ^3 Hyd. & Crat.	5	—16 03	4.3	29.6	10 31 54.3	19.0	44.3
31		l Leonis	6	+11 23	8.7	33.5	10 41 57.8	22.0	46.8
32		b^3 Hyd & Crat.	5.6	—19 16	56.2	22.0	10 46 47.1	12.3	38.3
33		1299 A. S. C.	5	—36 17	23.5	53.8	10 50 24.2	53.0	23.0
34		s Leonis	5.6	— 1 37	58.8	23.2	10 54 47.1	11.0	35.4
35		δ Hyd. & Crat.	3.4	—13 55	38.3	3.5	11 12 28.0	52.5	17.7
36		r Leonis	6	+ 2 17	8.9	33.0	11 16 57.0	20.7	45.0
37		Moon I	(9.0)	+ 2 51	32.9	57.5	11 19 21.7	46.0	11.1
38		τ Leonis	4	+ 3 44	1.8	25.7	11 20 49.8	13.9	38.0
39		υ Leonis	4.5	+ 0 03	4.6	29.0	11 29 52.9	16.8	41.0
40		92 Leonis	5.6	+22 14	43.0	9.3	11 33 35.0	0.6	27.0
41		ζ Hyd. & Crat.	4	—17 28	56.6	22.0	11 37 47.0	12.0	37.5
42		β Virginis	3.4	+ 2 40	41.0	5.5	11 43 29.2	53.0	17.5
43	11	δ Leonis	3	+21 24	53.0	19.0	11 06 44.6	10.3	36.3
44		δ Hyd & Crat.	3.4	—13 55	40.1	5.3	11 12 29.6	54.0	19.2
45		r Leonis	6	+ 2 17	10.5	35.0	11 16 58.8	23.6	47.0
*46		τ Leonis	4	+ 3 44	3.4	28.0	11 20 51.7	15.4	40.0
47		ξ Hyd. & Crat.	4	—30 58	21.6	50.1	11 26 17.8	45.5	14.0
48		υ Leonis	4.5	+ 0 03	6.6	31.0	11 29 54.8	18.5	42.9
49		92 Leonis	5.6	+22 14	45.0	11.5	11 33 37.0	2.5	28.8

May 6.—☽ ☌ μ and another star in Cancer of the 7th magnitude, not in A. S. C.
17.—p Centauri is 1109 Lacaille's catalogue.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
12	22	20.18				+0	41.99	+1.64	12	21	38.19	1
12	26	44.10		+0	42.06		.99		12	26	02.11	2
12	29	58.60					42.00		12	29	16.60	3
12	34	17.76					.00		12	33	35.76	4
13	06	22.38					.04		13	05	40.34	5
13	12	22.62					.04		13	11	40.58	6
13	17	30.86		+0	41.97	+0	42.05	+1.64	13	16	48.81	7
11	43	23.10	— .071			+0	59.13	+1.92	11	42	23.90	8
12	08	36.68	— .103				.17		12	07	37.41	9
12	11	29.76	— .075				.17		12	10	30.52	10
12	12	44.96	— .075				.17		12	11	45.72	11
12	17	18.06	— .028				.18		12	16	18.85	12
12	20	00.28	— .026				.18		12	19	01.07	13
12	22	37.06	— .101				.19		12	21	37.77	14
12	27	01.30	— .114	+0	59.19		.19		12	26	02.00	15
12	34	34.98	— .076				.20		12	33	35.70	16
12	43	03.30	— .163			+0	59.20	+1.92	12	42	03.94	17
12	27	03.16		+1	01.16	+1	01.13	+1.96	12	26	02.03	18
12	30	17.58					.13		12	29	16.45	19
12	34	36.90					.14		12	33	35.76	20
12	39	42.44					.14		12	38	41.30	21
12	44	57.34					.15		12	43	56.19	22
12	48	36.18					.16		12	47	35.02	23
13	00	33 30					.17		12	59	32.13	*24
13	02	43.76					.17		13	01	42.59	25
13	06	41.50					.18		13	05	40.32	26
13	12	41.38					.19		13	11	40.19	27
13	17	50.06		+1	01.15	+1	01.20	+1.96	13	16	48.86	28
10	25	30.00	— .244			+1	04.72	+2.10	10	24	25.04	29
10	31	54.30	— .426				.73		10	30	49.14	30
10	41	57.76	— .236				.75		10	40	52.77	31
10	46	47.18	— .450				.75		10	45	41.98	32
10	50	24.30	— .600				.76		10	49	18.94	33
10	54	47.10	— .325				.77		10	53	42.01	34
11	12	28.00	— .410	+1	04.78		.79		11	11	22.80	35
11	16	56.92	— .305				.79		11	15	51.83	36
11	19	21.84	— .292				.80		11	18	16.75	37
11	20	49.84	— .285				.80		11	19	44.76	38
11	29	52.86	— .314				.81		11	28	47.74	39
11	33	34.98	— .151				.82		11	32	30.01	40
11	37	47.02	— .436				.82		11	36	41.76	41
11	43	29.24	— .296			+1	04.83	+2.10	11	42	24.11	42
11	06	44.64		+1	06.90	+1	06.87	+1.85	11	05	37.77	43
11	12	29.64		+1	06.84		.87		11	11	22.77	44
11	16	58.78					.88		11	15	51.90	45
11	20	51.70					.88		11	19	44.82	*46
11	26	17.80					.88		11	25	10.92	47
11	29	54.76					.89		11	28	47.87	48
11	33	37.06				+1	06.89	+1.85	11	32	30.17	49

Nos. 24, 46. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 11	ζ Hyd. & Crat.	4	—17°28′	58.4	23.8	11 37 48.8	13.7	39.3
2	cont'd.	β Leonis	2.3	+15 28	13.0	38.3	11 42 02.9	27.6	53.0
3		A Virginis	6	+ 9 20	11.4	36.0	11 48 00.0	24.0	48.6
4		*b* Virginis	5.6	+ 4 33	6 0	30.7	11 52 54.5	18.3	43.0
5		ο Virginis	4.5	+ 9 37	24.0	48.6	11 58 12.8	37.0	1.6
6		*r* Virginis	6	+ 2 48	50.5	15.0	12 02 38.8	2.5	27.0
7		Moon I	(10.1)	— 3 11	5.2	30.3	12 04 54.6	18.8	43.7
8		γ Corvi	3	—16 39	54.3	19.6	12 08 44.5	9.4	34.8
9		η Virginis	3.4	+ 0 13	4.6	29.0	12 12 52.7	16.5	41.0
10		*f* Comæ Ber.	5.6	+26 59	32.1	59.3	12 17 26.1	52.6	20.1
11		*a* Comæ Ber.	5	+27 43	14.0	41.5	12 20 08.5	35.5	3.0
12		δ Corvi	3	—15 37	55.0	20.3	12 22 45.0	9.7	35.0
13		*q* Virginis	5.6	— 8 34	52.5	17.0	12 26 41.1	5.2	29.8
14	12	*t* Virginis	6	+11 09	39.0	3.5	12 06 28.0	52.3	17.0
15		γ Corvi	3	—16 39	56.0	21.4	12 08 46.2	11.0	36.3
16		η Virginis	3.4	+ 0 13	6.2	30.5	12 12 54.3	18.0	42.3
17		*f* Comæ Ber.	5.6	+26 59	33.7	1.0	12 17 27.8	54.2	21.8
18		*a* Comæ Ber.	5	+27 43	15.7	43.1	12 20 10.0	37.0	4.5
19		δ Corvi	3	—15 37	56.6	22.0	12 22 46.8	11.5	36.5
20		*q* Virginis	5.6	— 8 34	54.0	18.8	12 26 42.8	6.8	31.2
21		*d* Hyd. & Crat.	6	—26 15	31 4	58.6	12 30 25.1	51.5	18.8
22		γ^1 Virginis	4	— 0 34	56.5	20.5	12 34 44.5	8.2	32.8
23		33 Virginis	6	+10 26	37.0	2.0	12 39 26.2	50.3	15.0
24		30 Comæ Ber.	6	+28 25	46.0	13.5	12 42 40.5	7.5	35.0
*25		41 Virginis	6	+13 17	10 0	34 8	12 46 59.2	23.4	48.6
26		Moon I	(11.1)	— 9 01	20.5	45.5	12 50 10.2	34.8	0.0
27		ε Virginis	3.4	+11 49	35 0	59.8	12 55 24 1	48.3	13.0
28		*t* Comæ Ber.	5.6	+22 01	52.4	19.0	12 59 44.5	10.0	36.5
29		θ Virginis	4.5	— 4 41	3.5	27.9	13 02 51.8	15.6	39.8
30		55 Virginis	6	—19 05	58.2	24.2	13 06 49.0	14.3	40.0
31		58 Virginis	7	— 9 42	27.0	51.5	13 10 15.8	40.0	4.5
32		ι Centauri	3	—35 52	49.5	19.3	13 12 48.9	18.3	48.2
33		α Virginis	1	—10 19	8.5	33.4	13 17 57.8	22.0	46 8
34	13	θ Virginis	4.5	— 4 41	5.0	29.2	13 02 53.1	17.0	41.5
35		55 Virginis	6	—19 05	0.0	25 7	13 06 51.0	16.0	41.8
36		58 Virginis	7	— 9 42	28.8	53.5	13 10 17.5	41.5	6.5
37		ι Centauri	3	—35 52	50 8	21.0	13 12 50.3	19.8	50.0
38		α Virginis	1	—10 19	10.4	35.0	13 17 59 2	23.5	48.0
39		*i* Virginis	5	—11 52	40.5	5.2	13 19 29.6	54.0	18.8
40		*d* Centauri	4	—38 35	59.0	30.0	13 23 00.5	31.0	2.0
41		ζ Virginis	4	+ 0 13	57.5	21.7	13 27 45.8	9.5	34.0
42		Moon I	(12.1)	—14 24	25.2	50.5	13 36 15.2	39.9	5.2
43		11 Bootis	6	+28 10	13.6	41.1	13 55 08.1	35.1	2.8
44		θ Centauri	2	—35 35	31.4	1.5	13 58 30.8	59.8	30.0
45		*y* Virginis	6.7	— 9 34	54.0	18.5	14 01 42.6	6.8	31.3
46		κ Virginis	4	— 9 32	46.5	11.3	14 05 35.0	59.7	24.3
47		α Bootis	1	+20 01	44.0	9.6	14 09 35.0	0.5	26.2
*48	15	π Bootis	4	+17 06	38.0	3.5	14 34 28.4	53.2	18.7
49		ε Bootis	3	+27 45	21.3	48.9	14 39 15.8	42.6	10.1
50		α^2 Libræ	3	—15 22	28.3	53.5	14 43 18.2	43.0	8.1

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
11	37	48.80				+1	06.90	+1.85	11	36	41.90	1
11	42	02.96		+1	06 89		.90		11	40	56.06	2
11	48	00.00					.91		11	46	53.09	3
11	52	54.50					.92		11	51	47.58	4
11	58	12.84					.92		11	57	05.92	5
12	02	38.76					.93		12	01	31.83	6
12	04	54.56					.93		12	03	47.63	7
12	08	44.52					.94		12	07	37.58	8
12	12	52.76					.94		12	11	45.82	9
12	17	26.08					.95		12	16	19.13	10
12	20	08.50					.95		12	19	01.55	11
12	22	45.00					.95		12	21	38.05	12
12	26	41.12				+1	06.96	+1.85	12	25	34.16	13
12	06	27.96				+1	08.64	+1.60	12	05	19.32	14
12	08	46.18					.65		12	07	37.53	15
12	12	54.26					.65		12	11	45.61	16
12	17	27.70					.66		12	16	19.04	17
12	20	10.06					.66		12	19	01.40	18
12	22	46 68					.66		12	21	38.02	19
12	26	42.72					.67		12	25	34.05	20
12	30	25.08					.68		12	29	16.40	21
12	34	44.50					.68		12	33	35.82	22
12	39	26.10					.68		12	38	17.42	23
12	42	40.50					.69		12	41	31.81	24
12	46	59.20					.69		12	45	50.51	*25
12	50	10.20					.69		12	49	01.51	26
12	55	24.04					.70		12	54	15.34	27
12	59	44.48					.70		12	58	35.78	28
13	02	51.72					.70		13	01	43.02	29
13	06	49.14					.70		13	05	40.44	30
13	10	15.76					.71		13	09	07.05	31
13	12	48.84					.71		13	11	40.13	32
13	17	57.70		+1	08.79	+1	08.72	+1.60	13	16	48.98	33
13	02	53.16				+1	10.26	+1.46	13	01	42.90	34
13	06	50.90					.26		13	05	40.64	35
13	10	17.56					.26		13	09	07.30	36
13	12	50.38					.27		13	11	40.11	37
13	17	59.22		+1	10.31		.27		13	16	48.95	38
13	19	29.62					.28		13	18	19.34	39
13	23	00.50					.28		13	21	50.22	40
13	27	45.70					.29		13	26	35.41	41
13	36	15.20					.29		13	35	04.91	42
13	55	08.14					.31		13	53	57.83	43
13	58	30.70					.31		13	57	20.39	44
14	01	42.64					.31		14	00	32.33	45
14	05	35.48					.32		14	04	25.16	46
14	09	36.06		+1	10.28	+1	10.32	+1.46	14	08	24.74	47
14	34	28.36	— .168			+1	12.70	+0.83	14	33	15.49	*48
14	39	15.74	— .093	+1	12.70		.70		14	38	02.95	49
14	43	18.22	— .361	+1	12.70	+1	12.70	+0.83	14	42	05.16	50

No. 48. π Bootis is a fine double star—one being of the 4th and the other of the 5.6 magnitude.
25. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 15	ξ^1 Libræ	6	—11°14′	9.0	33.6	14 46 58.0	22.4	57.1
2	16	η Bootis	3	+19 12	29.0	54.8	13 48 20.2	45.0	11.0
3		ε Libræ	5.6	— 9 44	59.9	24.5	15 16 48.5	12.5	37.4
4		ζ^1 Libræ	6	—16 09	41.1	6 5	15 20 31.2	56.0	21.2
5		ζ^3 Libræ	6	—16 03	6.0	31.3	15 22 56.0	20.6	46.0
6		ζ^4 Libræ	6	—16 18	20 0	45.2	15 25 10.0	34.8	0.2
7		α Cor. Bor.	2	+27 15	17.1	44.3	15 29 11.2	38.0	5.0
8		κ Libræ	5	—19 09	10.0	35.8	15 34 01.0	26.2	52.0
9		α Serpentis	2.3	+ 6 56	51.4	16.1	15 37 40.0	3.7	26.2
10		b Scorpii	5.6	—25 15	46.0	12.7	15 42 39.0	5.2	32.0
11		A^1 Scorpii	5	—24 51	25.0	51.8	15 45 18.0	44.2	11.0
12		π Scorpii	3.4	—25 39	34.6	1.5	15 50 28.0	54.5	21.3
13		50 Libræ	6	— 7 57	38.0	2.2	15 53 26.2	50.3	14.8
•14		β^1 Scorpii	2	—19 22	34.3	0.0	15 57 25.3	50.5	16.5
•15		g^1 Serpentis	6	+10 19	26.9	51.5	16 01 15.7	40.0	4.5
16		δ Ophiuchi	3	— 3 16	26.3	50.8	16 07 14.5	38.2	2.8
17		Moon II	(15.2)	—26 00	46.5	14.3	16 08 41.6	8.9	36.8
18		σ Scorpii	4	—25 12	52.1	19.0	16 12 45.4	11.8	38.5
19		γ Herculis	3.4	+19 32			16 16 08.0	33.0	59.0
20		α Scorpii	1	—26 04	0.0	27.0	16 20 53.4	19.8	47.0
21		τ Scorpii	3.4	—27 52	18.2	46.0	16 27 13.0	40.0	7.6
22	17	δ Ophiuchi	3	— 3 16	27.3	51.6	16 07 15.5	39.4	3.6
23		σ Scorpii	4	—25 12	53.4	20.1	16 12 46.5	12.8	39.5
24		γ Herculis	3.4	+19 32	18.0	43.8	16 16 09.1	34.5	0.2
25		α Scorpii	1	—26 04	0.8	28.0	16 20 54.5	21.0	48.0
26		τ Scorpii	3.4	—27 52	19.5	47.2	16 27 14.0	40.8	8.5
27		33 Herculis	7	+ 7 26	34.3	59.0	16 30 23.0	47.0	11.2
28		1908 A. S. C.	6.7	—28 12	24.0	51.5	16 36 18.5	45.5	13.0
29		ε Scorpii	3	—34 00	9.1	38.5	16 41 07.1	35.7	5.1
30		s Herculis	6	+30 05	46.0	14.0	16 45 41.6	9.1	37.0
31		54 Herculis	5.6	+18 42	46.9	12.5	16 49 37.5	2.5	28.3
32		s Ophiuchi	6.7	—18 38	57.0	22.6	16 53 47.9	13.2	38.8
•33		32 Ophiuchi	5.6	+14 20	15.6	40.9	16 57 05.5	30.0	55.0
34		1959 A. S. C.	6	— 0 52	28.0	52.2	17 01 16.0	39.8	4.0
35		Moon II	(16.2)	—27 39	12.5	40.8	17 03 08.5	36.2	4.5
•36		A Ophiuchi	5.6	—26 22	55.5	22.7	17 06 49 2	15.8	43.0
37		ο Ophiuchi	4.5	— 0 15	53.5	17.8	17 09 41.5	5.2	29.6
•38		θ Ophiuchi	3.4	—24 50	36.2	3.2	17 13 29.4	55.5	22.5
•39	18	A Ophiuchi	5	—26 22	57.5	24.6	17 06 51.1	17.6	44.8
40		ο Ophiuchi	4.5	— 0 15	55.5	19.7	17 09 43 5	17.3	31.6
•41		θ Ophiuchi	3.4	—24 50	38.3	5.0	17 13 31.3	57.6	24.5
42		b Ophiuchi	5.6	—24 01	3.5	30.2	17 17 56.2	22.2	48.8
43		υ Scorpii	3.4	—37 09	13.5	44.2	17 21 14.0	43.8	14.5
44		λ Herculis	4.5	+26 14	41.7	9.0	17 25 35.6	2.0	29.2
45		α Ophiuchi	2	+12 41	0.5	25.3	17 28 49.7	14.0	39.0
46		κ Scorpii	3	—38 56	44.2	15.4	17 32 46.0	16.6	48.0
47		3 Sagittarii	5.6	—27 46	55 3	22.9	17 38 49.8	16.8	44.0
48		μ Herculis	4	+27 49	36.5	4.0	17 41 31.0	58.0	25.3
49		z Ophiuchi	6	—24 51	30.2	57.0	17 46 23.2	49.5	16.2
50		89 Herculis	6	+26 05	23.2	50.5	17 50 17.0	43.5	10.2

May 18.—☽ ☌ 2065 A. S. C.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	46	58.02	— .336			+1	12.71	+0.83	14	45	44.97	1
13	48	20.00	— .199	+1	12.98	+1	13.16	+0.77	13	47	06.64	2
15	16	48.56	— .428				.20		15	15	34.93	3
15	20	31.20	— .477				.21		15	19	17.51	4
15	22	55.98	— .476				.21		15	21	42.29	5
15	25	10.04	— .478				.21		15	23	56.35	6
15	29	11.12	— .126		13.20		.21		15	27	57.78	7
15	34	01.00	— .503				.21		15	32	47.29	8
15	37	39.88	— .298		13.29		.22		15	36	26.36	9
15	42	38.98	— .557				.22		15	41	25.20	10
15	45	18.00	— .553				.22		15	44	04.23	11
15	50	27.98	— .561				.22		15	49	14.20	12
15	53	26.30	— .407				.22		15	52	12.67	13
15	57	25.32	— .505		13.18		.22		15	56	11.60	*14
16	01	15.72	— .272				.22		16	00	02.23	*15
16	07	14.52	— .376		13.21		.22		16	06	00.92	16
16	08	41.62	— .564				.22		16	07	27.84	17
16	12	45.36	— .557				.23		16	11	31 57	18
16	16	07.90	— .196				.23		16	14	54.47	19
16	20	53.44	— .564	+1	13.21		.23		16	19	39.65	20
16	27	12.96	— .571			+1	13.23	+0.77	16	25	59.16	21
16	07	15.48	— .322	+1	14.22	+1	14.24	+1.52	16	06	00.92	22
16	12	46.46	— .478				.24		16	11	31.74	23
16	16	09.12	— .169				.24		16	14	54.71	24
16	20	54.46	— .483	+1	14.27		.24		16	19	39.74	25
16	27	14.00	— .490				.25		16	25	59.26	26
16	30	22.90	— .252				.26		16	29	08.39	27
16	36	18.50	— .502				.26		16	35	03.74	28
16	41	07.10	— .553				.27		16	39	52.28	29
16	45	41.54	— .075				.27		16	44	27.20	30
16	49	37.54	— .190				.28		16	48	23.07	31
16	53	47.90	— .428				.28		16	52	33.19	32
16	57	05.40	— .210				.28		16	55	50.91	*33
17	01	16.00	— .307				.29		17	00	01.40	34
17	03	08.50	— .488				.29		17	01	53.72	35
17	06	49.24	— .485				.29		17	05	34.47	*36
17	09	41.52	— .303				.30		17	08	26.92	37
17	13	29.36	— .479			+1	14.30	+1.52	17	12	14.58	*38
17	06	51.12	— .254			+1	16.36	+1.84	17	05	34.51	*39
17	09	43 52	— .158				.36		17	08	27.00	40
17	13	31.34	— .247				.37		17	12	14.72	*41
17	17	56.18	— .243				.37		17	16	39.57	42
17	21	14.00	— .304				.37		17	19	57.33	43
17	25	35.50	— .061				.38		17	24	19.06	44
17	28	49.70	— .138	+1	16.29		.38		17	27	33.18	45
17	32	46.04	— .314				.39		17	31	29.34	46
17	38	49.76	— .259				.40		17	37	33.10	47
17	41	30.96	— .054				.40		17	40	14.51	48
17	46	23.22	— .246				.41		17	45	06.56	49
17	50	16.88	— .062			+1	16.41	+1.84	17	49	00.41	50

Nos. 14, 15, 38, 39, 41. Two stars in the field of the instrument.
33. Recorded 16*h*. 56*m*. at transit over middle wire.
36, 39. A Ophiuchi is a close double star, each being of the 5.6 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 18	ν Herculis	5	+30°12′	46.0	14.2	17 53 41.6	9.0	37.3
2	cont'd.	Moon II	(17.3)	—27 57	41.2	9.6	17 58 37.6	5.6	33.8
3		μ^1 Sagittarii	3.4	—21 06	40.0	6.0	18 05 31.5	57.0	23.0
4		δ Sagittarii	3.4	—29 53	9.8	37.8	18 12 05.1	32.5	0.5
*5		t Herculis	6	+28 48	10.5	38.2	18 16 05.5	32.6	0.4
6		λ Sagittarii	4	—25 30	33.0	59.4	18 19 26.0	52.5	19.0
7		δ Aquilæ	3.4	+ 2 48	56.8	21.1	19 18 45.0	8.7	33.0
*8	21	γ Aquilæ	3	+10 13	14.0	38.5	19 40 02.5	26.5	51.1
9		α Aquilæ	1.2	+ 8 27	33.0	57.6	19 44 21.6	45.6	10.2
10		β Aquilæ	3.4	+ 6 01	2.0	26.6	19 48 50.5	14.4	38.8
11		c Sagittarii	4.5	—28 09	18.0	45.5	19 54 12.6	39.8	7.0
12		θ Aquilæ	3.4	— 1 17	38.0	2 5	20 04 26.2	50.0	14.4
*13		α^2 Capricorni	3	—13 02	44.5	9 5	20 10 34.1	58.6	23.4
*14		β^2 Capricorni	3.4	—15 17	34.6	0.0	20 13 24.6	49.2	14.5
15		25 Vulpeculæ	6	+23 56	41.0	7.5	20 16 33.6	59.6	26.2
16		f Capricorni	6	—22 55	39.0	5.5	20 21 31.2	57.0	23.6
17		ε Delphini	4	+10 46	8.4	33.0	20 26 57.1	21.2	46.0
18		β Delphini	4	+14 03	36.0	1.2	20 31 25.9	50.3	15.3
19		α Delphini	3.4	+15 21	45.3	10.5	20 33 35.2	0.0	25.2
20		δ Delphini	5	+14 30	32.5	57.6	20 37 22.3	46.8	12.0
21		ε Aquarii	4.5	—10 04	34.5	59.5	20 40 23.8	48.0	13.0
22		ζ Cygni	3	+29 34	34.8	2.6	21 07 30.1	57.5	25.4
*23	22	f Hydræ con.	6	—25 40	28.0	55.0	13 29 21.3	47.6	14.8
24		83 Virginis	6	—15 22	27.5	52.5	13 37 17.0	41.5	6.5
*25		k Centauri	5	—32 12	4.5	33.3	13 44 01.5	29.5	58.2
26		η Bootis	3	+19 12	38.0	3.5	13 48 28.5	53.5	19.0
27		S^2 Hydræ con.	6	—24 13	35.0	1.5	13 52 28.0	54.0	21.0
28		11 Bootis	6	+28 10		52.5	13 55 19.5		
29		θ Centauri	2	—35 35	43.0	13.0	13 58 42.3	11.5	41.5
30		κ Virginis	4	— 9 32	58.0	22.5	14 05 46.5	10.5	35.0
31		α Bootis	1	+20 01	55.1	21.0	14 09 46.2	11.5	37.5
32		y Bootis	6	+17 03	45.0	10.5	14 13 35.5	0.5	26.0
*33		1636 A. S. C.	5.6	+ 6 33	49.8	14.3	14 17 38.2	2.1	27.0
34		φ Virginis	5	— 1 30	34.4	58.7	14 21 22.5	26.2	10.5
35		ρ Bootis	4.5	+31 04	24.2	52.8	14 26 20.5	48.0	16.5
36		σ Bootis	5	+30 26	11.3	39.5	14 29 07.1	34.7	3.0
37	25	α Comæ Ber.	5	+27 43	34.0	1.5	12 20 28.2	55.0	22.5
38		δ Corvi	3	—15 37	15.0	40.3	12 23 05.0	30.0	55.0
39		β Corvi	2 3	—22 31	37.0	3.3	12 27 29.1	55.0	21.3
40		d Hyd & Crat.	5.6	—26 15	50.0	17.0	12 30 43.6	10.0	37.0
41		γ^1 Virginis	4	— 0 34	15.0	39.2	12 35 03.0	26.8	51.0
42		n Comæ Ber.	6	+17 27	18.2	43.7	12 40 08.6	33.5	59.2
43		δ Virginis	3.4	+ 4 16	14.0	38.5	12 49 02.5	26.5	51.0
*44	26	k Centauri	5	—32 12	12.0	41.0	13 44 09.0	37.0	6.0
45		η Bootis	3	+19 12	45.2	11.1	13 48 36.2	1.4	27.3
46		S^2 Hydræ con.	6	—24 13	42.7	9.2	13 52 35.6	1.9	28.5
47		11 Bootis	6	+28 10	52.7	20.2	13 55 27 2	54.2	21.8
48		θ Centauri	2	—35 35	50.7	20.5	13 58 50.2	19.0	49.0
49		κ Virginis	4	— 9 32	5.5	30.2	14 05 54 4	18.5	43.0

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
17	53	41.62	— .044			+1	16.42	+1.84	17	52	25.16	1
17	58	37.56	— .260				.42		17	57	20.88	2
18	05	31.50	— .232	+1	16.48		.43		18	04	14.84	3
18	12	05.14	— .264				.44		18	10	48.44	4
18	16	05.44	— .050				.44		18	14	48.95	*5
18	19	25.98	— .250				.44		18	18	09.29	6
19	18	44.92	— .147	+1	16.56	+1	16.52	+1.84	19	17	28.25	7
19	40	02.52	— .464	+1	20.63	+1	20.41	+1.73	19	38	41.65	*8
19	44	21.60	— .486		20.24		.42		19	43	00.69	9
19	48	50.46	— .519		20.41		.42		19	47	29.52	10
19	54	12.58	— .993				.43		19	52	51.16	11
20	04	26.22	— .613				.44		20	03	05.17	12
20	10	34.02	— .766		20.44		.45		20	09	12.80	*13
20	13	24.58	— .798				.45		20	12	03.33	*14
20	16	33.58	— .268				.46		20	15	12.85	15
20	21	31.26	— .909				.46		20	20	09.89	16
20	26	57.14	— .256				.47		20	25	36.41	17
20	31	25.74	— .412				.47		20	30	04.86	18
20	33	35.24	— .394				.48		20	32	14.37	19
20	37	22.24	— .406				.48		20	36	01.35	20
20	40	23.76	— .728				.48		20	39	02.55	21
21	07	30.08	— .178	+1	20.50	+1	20.52	+1.73	21	06	09.38	22
13	29	21.34	— .251			+1	21.47	+1.54	13	27	59.62	*23
13	37	17.00	— .210				.48		13	35	55.31	24
13	44	01.40	— .280				.48		13	42	39.64	*25
13	48	28.50	— .089	+1	21.61		.49		13	47	06.92	26
13	52	27.90	— .244				.49		13	51	06.17	27
13	55	19.48	— .053				.49		13	53	57.94	28
13	58	42.26	— .296				.50		13	57	20.46	29
14	05	46.50	— .189				.51		14	04	24.80	30
14	09	46.26	— .086	+1	21.39		.51		14	08	24.66	31
14	13	35.50	— .097				.51		14	12	13.89	32
14	17	38.28	— .135				.52		14	16	16.63	*33
14	21	22.46	— .162				.52		14	20	00.78	34
14	26	20.40	— .040				.53		14	24	58.83	35
14	29	07.12	— .042			+1	21.53	+1.54	14	27	45.55	36
12	20	28.24	— .073			+1	26.89	+2.15	12	19	01.28	37
12	23	05.06	— .282				.89		12	21	37.89	38
12	27	29.14	— .317	+1	26.93		.90		12	26	01.92	39
12	30	43.52	— .337				.90		12	29	16.28	40
12	35	03.00	— .212				.91		12	33	35.88	41
12	40	08.64	— .128				.92		12	38	41.59	42
12	49	02.50	— .190			+1	26.93	+2.15	12	47	35.38	43
13	44	09.00	+ .140			+1	29.45	+1.70	13	42	39.69	*44
13	48	36.24	+ .045	+1	29.49		.45		13	47	06.83	45
13	52	35.58	+ .122				.46		13	51	06 24	46
13	55	27.22	+ .026				.46		13	53	57.79	47
13	58	49.88	+ .148				.46		13	57	20.57	48
14	06	51.32	+ .095			+1	29.47	+1.70	14	04	24.94	49

No. 5, 13, 14, 33. Two stars in the field of the instrument.
8. Recorded 19*h*. 39*m*. at transit over middle wire.
23 *f* Hydræ con. is a double star; one estimated of the 6th, and the other of the 7th magnitude.
25, 44. *k* Centauri is double and unequal, one being of the 5th, and the other of the 7th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 26	α Bootis	1	+20°01′	3.0	28.8	14 09 54.0	19.2	45.0
2	cont'd.	34 Bootis	4.5	+27 13	2.0	29.3	14 37 56.0	22.7	50.3
3		ε Bootis	3	+27 45	38 0	5.5	14 39 32.5	59.5	27.0
*4		α² Libræ	3	—15 22	44.7	10.0	14 43 34.7	59.3	24.7
5		1698 A. S. C.	6	+17 02	26.0	51.7	14 51 16.6	41.5	7.0
*6	27	l Bootis	6	+20 46	43.5	9.5	13 34 35.0	0.5	26.5
7		83 Virginis	6	—15 22	35.2	0.7	13 37 25.3	50.0	15.3
8		τ Virginis	4.5	+ 2 19	15.4	39.6	13 55 03.5	27.4	51.7
9		κ Virginis	4	— 9 32	6.5	31.0	14 05 55.1	19.3	44.0
10		α Bootis	1	+20 01	4.0	30.0	14 09 55.3	20.6	46.5
11	30	κ Virginis	4	— 9 32	10.0	34.4	14 05 58.5	22.6	47.1
12		α Bootis	1	+20 01	7.3	33.2	14 09 58.5	23.7	49.5
13		y Bootis	6	+17 03	57.2	22.7	14 13 47.5	12.2	38.0
*14		1636 A. S. C.	5.6	+ 6 33	2.0	26.7	14 17 50.5	14.2	38.8
15		φ Virginis	5.6	— 1 30	46.1	10 4	14 21 34.2	58.0	22.5
16		ρ Bootis	4	+31 04	36.5	5.0	14 26 32.8	0.6	29.0
17		σ Bootis	5	+30 26	23.7	52.0	14 29 19.5	47.0	15.5
18		α Lupi	3	—46 42	46.5	22.0	14 32 56.5	31.1	6.7
19		ε Bootis	3	+27 45	42.3	9.9	14 39 36.8	3.7	31.0
*20		α² Libræ	3	—15 22	49.0	14.0	14 43 38.8	3.5	28.8
21		ξ¹ Libræ	6	—11 14	29.8	54.5	14 47 18.8	43.0	8.0
22		χ Centauri	3	—41 27	19.5	52.0	14 50 23 8	55.5	28.0
23		20 Libræ	3.4	—24 39	27.0	53.7	14 56 20.1	46.3	13.0
24		ν¹ Libræ	6.7	—15 38	29.5	55.0	14 59 19.5	44.0	9.5
25	31	η Bootis	3	+19 12	49.7	15.5	13 48 40.8	5.8	31.7
26		S¹ Hydræ con.	6	—24 11	17.2	44.0	13 51 10.0	36.0	2.8
27		τ Virginis	5	+ 2 19	19.0	43.3	13 55 07.2	31.0	55.2
28		π Hydræ con.	4.5	—25 54	59.7	26.6	13 58 53.2	19.7	46.6
29		1610 A. S. C.	6	—15 32	53.2	18.7	14 03 43.4	8.0	33.4
30		κ Virginis	4	— 9 32	10.0	34.9	14 05 58.8	22.6	47.5
31		α Bootis	1	+20 01	7.2	33.3	14 09 58.5	23.6	49.8
32		t Bootis	6	+13 45	19.0	44.0	14 13 08.5	33.0	58.0
33		1633 A. S. C.	6	—24 04	25.8	52.3	14 17 18.5	44.5	11.2
34		N² Virginis	6	— 6 10	4.0	28.5	14 21 52.5	16.4	40.8
35		η Centauri	3	—41 27	55.0	27.5	14 26 59.2	31.0	3.5
36		1651 A. S. C.	6.7	—11 37	17 5	42.0	14 30 06.3	30.5	55.0
37		α Lupi	3	—46 42	46.3	22.1	14 32 56.6	31.0	6.7
38		ε Bootis	3	+27 45	42.2	9.5	14 39 36.5	3.5	31.0
39		α² Libræ	3	—15 22	49.0	14.3	14 43 39.0	3.7	29.0
40		1690 A. S. C.	6.7	—20 40	53.5	19.5	14 49 45.0	10.5	36.5
41		δ Libræ	5	— 7.53	14.0	38.8	14 54 02.6	26 5	51.3
42		20 Libræ	3.4	—24.39	27.1	54.0	14 56 20.2	46.3	13.2
*43	June 1	π Hydræ con.	4.5	—25 54	1.0	28.0	13 58 54.5	21.0	48.0
44		1610 A. S. C.	6	—15 32	54 6	20.0	14 03 44.6	9.2	34.6
45		κ Virginis	4	— 9 32	11.1	35.8	14 06 00.0	24.1	48.7
46		α Bootis	1	+20 01	8.7	34.5	14 10 00.0	25.5	51.2
47		t Bootis	6	+13 45	20.2	45 0	14 13 09.8	34.6	59.3
48		1633 A. S. C.	6	—24 04	27.0	53.6	14 17 19 8	45.8	12.2
49		N² Virginis	6	— 6 10	5.3	29.8	14 21 53.8	17.8	42.2

May 27.—Observations interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	09	54.00	+ .043	+1	29.27	+1	29.47	+1.70	14	08	24.57	1
14	37	56.06	+ .028				.50		14	36	26.59	2
14	39	32.60	+ .027		29.57		.50		14	38	03.03	3
14	43	34.68	+ .105	+1	29.56		.50		14	42	05.28	*4
14	51	16.56	+ .050			+1	29 51	+1.70	14	49	47.10	5
13	34	35.00	+ .073			+1	30.46	+1.00	13	33	04.61	*6
13	37	25.30	+ .125				.46		13	35	54.96	7
13	55	03.52	+ .131				.47		13	53	33.18	8
14	05	55.18	+ .167				.48		14	04	24.87	9
14	09	55.28	+ .075	+1	30.57	+1	30.48	+1.00	14	08	24.87	10
14	05	58.52	+ .227			+1	33.82	+0.06	14	04	24.93	11
14	09	58.44	+ .103	+1	33.78		.82		14	08	24.72	12
14	13	47.52	+ .117				.82		14	12	13.82	13
14	17	50.44	+ .162				.82		14	16	16.78	*14
14	21	34.24	+ .194				.82		14	20	00.61	15
14	26	32.78	+ .048				.82		14	24	59.01	16
14	29	19.54	+ .051				.82		14	27	45.77	17
14	32	56.56	+ .436				.82		14	31	23.18	18
14	39	36.74	+ .065		33.84		.82		14	38	02.98	19
14	43	38.82	+ .252	+1	33.84		.82		14	42	05.25	*20
14	47	18.82	+ .235				.82		14	45	45.23	21
14	50	23.76	+ .395				.82		14	48	50.33	22
14	56	20.08	+ .296				.82		14	54	46.56	23
14	59	19.50	+ .254			+1	33.82	+0.06	14	57	45.93	24
13	48	40.70	+ .107	+1	34.05	+1	33.88	+0.70	13	47	06.93	25
13	51	10.00	+ .294				.88		13	49	36.41	26
13	55	07.14	+ .179				.88		13	53	33.44	27
13	58	53.16	+ .300				.88		13	57	19.58	28
14	03	43.34	+ .253				.88		14	02	09.71	29
14	05	58.76	+ .227				.88		14	04	25.11	30
14	09	58.48	+ .103		33.83		.88		14	08	24.70	31
14	13	08.50	+ .131				.88		14	11	34.75	32
14	17	18.46	+ .293				.88		14	15	44.87	33
14	21	52.44	+ .213				.88		14	20	18.77	34
14	26	59.24	+ .395				.89		14	25	25.74	35
14	30	06.26	+ .237				.89		14	28	32.61	36
14	32	56.54	+ .436				.89		14	31	23.09	37
14	39	36.54	+ .065		33.64		.89		14	38	02.71	38
14	43	39.00	+ .252	+1	34.02		.90		14	42	05.35	39
14	49	45.00	+ .276				.90		14	48	11.38	40
14	54	02.64	+ .231				.90		14	52	28.97	41
14	56	20.16	+ .296			+1	33.90	+0.70	14	54	46.56	42
13	58	54.50	+ .300			+1	35.21	+1.34	13	57	19.59	*43
14	03	44.60	+ .253				.22		14	02	09.63	44
14	05	59.94	+ .227				.23		14	04	24.94	45
14	09	59.98	+ .103	+1	35.33		.24		14	08	24.84	46
14	13	09.78	+ .131				.24		14	11	34.67	47
14	17	19.68	+ .293				.25		14	15	44.72	48
14	21	53.78	+ .213			+1	35.26	+1.34	14	20	18.73	49

Nos. 4, 6, 14, 20, 43. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 1	η Centauri	3	—41°27′	56.5	29.0	14 27 00.8	32.5	5 0
2	cont'd.	1651 A. S. C.	6.7	—11 37	18.4	43.2	14 30 07.5	31.7	56.5
*3		α Lupi	3	—46 42	47.6	23.0	14 32 57 7	32.4	8.0
4		ε Bootis	3	+27 45	43.6	11.2	14 39 38.0	5.0	32.5
*5		α^2 Libræ	3	—15 22	50.4	15.6	14 43 40.3	5.0	30.2
6		1690 A. S. C.	6.7	—20 40	54.9	21.0	14 49 46.4	11.6	37.8
7		δ Libræ	5	— 7 53	15.4	40.0	14 54 04.0	28.0	52.5
8		20 Libræ	3.4	—24 39	28.5	55.2	14 56 21.5	47.7	14.2
9	5	ε Bootis	3	+27 45	47.6	15.0	14 39 42.1	9.0	36.4
*10		α^2 Libræ	3	—15 22	55.0	20.4	14 43 45.0	9.5	34.8
11		ξ^1 Libræ	6	—11 14	35.6	0.5	14 47 24.8	49.0	13.8
12		1698 A. S. C.	6	+17 02	36.1	1.6	14 51 26.5	51.3	16.8
13		20 Libræ	3.4	—24 39	33.0	59.9	14 56 26.0	52.1	19.0
14	7	δ Leonis	3	+21 24	24.5	50.7	11 07 16.3	41.9	8.0
15		β Leonis	2.3	+15 28	44.9	10.0	11 42 34.7	59.5	24.4
16		Moon I	(7.7)	— 1 28	39.4	4.1	11 50 28.5	52.8	17.5
17		ο Virginis	4.5	+ 9 37	56.0	20.5	11 58 44.5	8.5	33.2
18		γ Corvi	3	—16 39	26.0	51.5	12 09 16.3	41.0	6.5
19		η Virginis	3.4	+ 0 13	36.6	0.8	12 13 24.5	48.2	12.8
20		α Cor. Bor.	2	+27 15	42.5	9.8	15 29 36.7	3.5	31.0
21		α Serpentis	2.3	+ 6 56	17.1	41.4	15 38 05.5	29.5	54.0
22		b Scorpii	5	—25 16	12.0	38.5	15 43 05.0	31.5	58.0
23		A^1 Scorpii	5	—24 51	51.0	17.7	15 45 43.6	10.0	36.8
24		π Scorpii	3.4	—25 39			15 50 54.1	20.2	47.0
*25		β^1 Scorpii	2	—19 22	0.5	26.0	15 57 51.5	17.0	42.5
26	8	β Leonis	2.3	+15 28	45.5	10.7	11 42 35.5	0.2	25.5
27		ο Virginis	4.5	+ 9 37	56.5	21.0	11 58 45.2	9.5	34.0
28		ε Corvi	4	—21 44	44.5	10.8	12 03 36.3	1.8	28.0
29		γ Corvi	3	—16 39	26.5	52.0	12 09 17.1	42 0	7.5
30		η Virginis	3.4	+ 0 13	37.1	1.5	12 13 25.3	49.0	13.5
31		f Comæ Ber.	5	+26 59	4.5	31.5	12 17 58.5	25.5	52.5
32		β Corvi	2.3	—22 31	50.0	16.0	12 27 41.8	7.6	33.8
33		χ Virginis	6	— 7 07	53.2	17.6	12 32 41.6	5.5	30.0
34		Moon I	(8.7)	— 7 24	12.0	37.0	12 36 01.6	26.2	51.2
35		n Comæ Ber.	6	+17 27	30.6	56.0	12 40 21.0	46.0	11.5
36		37 Virginis	6.7	+ 3 56	22.2	46.7	12 45 10.5	34.2	58.8
37		ψ Virginis	5.6	— 8 40	56.0	20.5	12 47 44.6	8.7	33.2
38		ε Virginis	3.4	+11 49	5.5	30.8	12 55 55.0	19.0	44.0
39		g Virginis	5.6	— 9 53	25.0	49.6	13 01 13.8	38.0	2.5
40		β Cor. Bor.	4	+29 40	1.2	29.2	15 22 56.5	23.8	52.0
41		α Cor. Bor.	2	+27 15	43.8	11.0	15 29 37.9	4.8	31.8
42		κ Libræ	5	—19 09	37.0	2.5	15 34 28.0	53.5	19.0
43		α Serpentis	2.3	+ 6 56	18.0	42.6	15 38 06.5	30.5	55.0
44		b Scorpii	5	—25 16	12.8	39.6	15 43 06.0	32.3	59.0
45		A^1 Scorpii	5	—24 51	51.8	18.5	15 45 45.0	11.3	38.0
46		π Scorpii	3.4	—25 39	1.5	28.5	15 50 55.0	21.5	48.3
47		50 Libræ	6	— 7 57	4.5	29 0	15 53 53.0	17.0	41.5
*48		β^1 Scorpii	2	—19 22	1 0	27.0	15 57 52.2	17.4	43 2
*49		κ^1 Herculis	5.6	+17 29	44.0	9.5	16 02 34.2	59.0	24.5
50		δ Ophiuchi	3	— 3 17	53.1	17.6	16 07 41.3	5.0	29.5

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	27	00.76	+ .395			+1	35.27	+1.34	14	25	25.88	1
14	30	07.46	+ .237				.27		14	28	32.43	2
14	32	57.74	+ .486				.27		14	31	22.91	*3
14	39	38.06	+ .065	+1	35.17		.28		14	38	02.84	4
14	43	40.30	+ .252	+1	35.32		.29		14	42	05.26	*5
14	49	46.34	+ .276				.30		14	48	11.32	6
14	54	03.98	+ .231				.31		14	52	28.90	7
14	56	21.42	+ .296			+1	35.31	+1.34	14	54	46.41	8
14	39	42.02	— .254	+1	38.83	+1	38.78	+0.37	14	38	02.99	9
14	43	44.94	— .981	+1	38.73		.78		14	42	05.18	*10
14	47	24.74	— .913				.78		14	45	45.05	11
14	51	26.46	— .455				.78		14	49	47.23	12
14	56	26.00	—1.150			+1	38.78	+0.37	14	54	46.07	13
11	07	16.28	— .376	+1	38.47	+1	38.37	+1.10	11	05	37.53	14
11	42	34.70	— .481		38.40		.39		11	40	55.83	15
11	50	28.46	— .756				.40		11	48	49.30	16
11	58	44.54	— .579				.41		11	57	05.55	17
12	09	16.26	—1.004				.41		12	07	36.85	18
12	13	24.58	— .729				.42		12	11	45.43	19
15	29	36.70	— .264		38.58		.57		15	27	57.87	20
15	38	05.50	— .622		38.45		.58		15	36	26.30	21
15	43	05.00	—1.161				.58		15	41	25.26	22
15	45	43.86	—1.152				.58		15	44	04.13	23
15	50	53.94	—1.170				.59		15	49	14.18	24
15	57	51.50	—1.051	+1	38.59	+1	38.59	+1.10	15	56	11.86	*25
11	42	35.48	— .259	+1	39.39	+1	39.57	+1.10	11	40	55.65	26
11	58	45.24	— .312				.58		11	57	05.35	27
12	03	36.28	— .612				.58		12	01	56.09	28
12	09	17.02	— .542				.59		12	07	36.89	29
12	13	25.28	— .395				.59		12	11	45.30	30
12	17	58.50	— .145				.59		12	16	18.77	31
12	27	41.84	— .598		39.46		.60		12	26	01.64	32
12	32	41.58	— .456				.60		12	31	01.52	33
12	36	01.60	— .460				.61		12	34	21.53	34
12	40	21.02	— .341				.61		12	38	41.07	35
12	45	10.48	— .361				.61		12	43	30.51	36
12	47	44.60	— .470				.62		12	46	04.51	37
12	55	54.86	— .293				.62		12	54	14.95	38
13	01	13.78	— .481				.63		12	59	33.67	39
15	22	56.54	— .116				.73		15	21	16.69	40
15	29	37.86	— .142		39.85		.74		15	27	57.98	41
15	34	28.00	— .566				.74		15	32	47.69	42
15	38	06.52	— .336		39.74		.74		15	36	26.44	43
15	43	05.92	— .627				.75		15	41	25.54	44
15	45	44.92	— .622				.75		15	44	04.55	45
15	50	54.96	— .632				.75		15	49	14.58	46
15	53	53.00	— .467				.76		15	52	12.77	47
15	57	52.16	— .570		39.72		.76		15	56	11.88	*48
16	02	34.24	— .341				.76		16	00	54.14	*49
16	07	41.50	— .423	+1	39.93	+1	39.77	+1.10	16	06	01.31	50

No. 3. α Lupi is recorded at transit over middle wire, 14*h.* 33*m.*
Nos. 5, 10, 25, 48. Two stars in the field of the instrument.
No. 49. Three stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 8	σ Scorpii	4	−25°12′	19.2	46.0	16 13 12.4	38.8	5.5
2	cont'd	ξ Cor. Bor.	5	+31 16	38.5	6.8	16 17 34.5	2.3	30.0
3		α Scorpii	1	−26 04	27.0	54.0	16 21 20.5	47.0	14.0
4		ω Ophiuchi	5	−21 07	31.8	58.0	16 24 23.5	49.0	15.2
5		τ Scorpii	3.4	−27 52	45.4	13.1	16 27 40.0	7.0	34.5
6	11	d Bootis	5.6	+25 51	56.0	23.0	14 04 49.5	16.0	43.0
7		α Bootis	1	+20 01	14.1	40.0	14 10 05.5	31.0	56.8
*8		λ Virginis	4.5	−12 38	22.0	46.9	14 12 11.2	35.5	0.6
*9		7 Hydræ con.	6	−27 00	43.3	10.6	14 15 37.3	4.0	31.5
10		ρ Bootis	4	+31 04	43.5	11.7	14 26 39.4	7.2	35.7
11		1651 A. S. C.	6.7	−11 38	24.2	49.8	14 30 13.8	37.5	2.5
12		ε Bootis	3	+27 45	49.5	17.0	14 39 43.7	10.3	38.0
*13		α^2 Libræ	3	−15 22	56.1	21.3	14 43 46.0	10.7	36.1
14		ξ^1 Libræ	6.7	−11 14	37.0	1.8	14 47 26.0	50.2	15.0
15		1690 A. S. C.	6.7	−20 40	0.5	26.5	14 49 52.1	17.5	43.5
*16		18 Libræ	6.7	−10 30	9.5	34.2	14 51 58.5	22.7	47.4
17		20 Libræ	3.4	−24 39	34.0	1.0	14 56 27.1	53.2	20.1
18		Moon I	(11.8)	−22 02	10.0	37.0	14 58 03.6	30.2	57.1
19		c Bootis	5	+25 30	7.0	33.7	15 02 00.5	27.3	53.5
20		ι^1 Libræ	5.6	−19 11	0.0	25.6	15 04 50.8	16 0	41.6
*21		β Libræ	2.3	− 8 47	19.5	44.1	15 10 08.2	32.3	57.0
22		υ Libræ	6.7	−17 34	43.5	9.0	15 13 34.0	59.0	24.5
23		ε Libræ	5.6	− 9 44	27.0	51.8	15 17 16.0	40.1	4.6
24		ζ^1 Libræ	6	−16 09	8.5	33.7	15 20 58.6	23.2	48.5
25		ζ^4 Libræ	6	−16 18	47.5	13.0	15 25 37.5	2.0	27.5
26		α Cor. Bor.	2	+27 15	44.8	12.0	15 29 38.9	5.8	33.0
27	12	c Bootis	5	+25 30	7.5	34.2	15 02 00.6	27.0	53.7
28		ι^1 Libræ	5.6	−19 11	0.5	26.1	15 04 51.2	16.3	42.1
29		β Libræ	2.3	− 8 47	20.0	44.5	15 10 08.6	32.6	57.1
30		υ Libræ	6.7	−17 34	44.0	9.5	15 13 34.5	59.5	25.0
31		ε Libræ	6	− 9 44	27.5	52.1	15 17 16.4	40.7	5.2
32		ζ^1 Libræ	6	−16 09	9.0	34.0	15 20 59.0	24.0	49.0
33		ζ^4 Libræ	6	−16 18	48.0	13.0	15 25 38.0	2.5	27.5
34		α Cor. Bor.	2	+27 15	45.0	12.2	15 29 39.0	5.7	33.3
35		κ Libræ	5	−19 09	38.0	3.9	15 34 29.0	54.0	20.0
36		α Serpentis	2.3	+ 6 56	19.5	43.8	15 38 07.8	31.6	56.2
37		b Scorpii	5	−25 16	13.8	40.5	15 43 06.7	33.0	0.0
38		A^1 Scorpii	5	−24 51	52.6	19.5	15 46 45.9	12.5	39.5
39		Moon I	(12.8)	−25 14	43.8	11.5	15 49 38.5	5.5	33.3
40		50 Libræ	6	− 7 57	5.5	30.0	15 53 54.0	18.0	42.5
*41		β^1 Scorpii	2	−19 22	2.0	28.0	15 57 53.2	18.4	44.5
42		δ Ophiuchi	3	− 3 17	54.0	18.5	16 07 42.4	6.3	30.6
43		σ Scorpii	4	+25 12	20.0	47.0	16 13 13.3	39.6	6.5
44		ξ Cor. Bor.	5	+31 16	39.9	8.0	16 17 36.0	4.0	32.2
45		α Scorpii	1	−26 04	27.5	54.6	16 21 21.2	47.8	15.0
46		ω Ophiuchi	5	−21 07	32.2	58.8	16 24 24.0	49.3	16.0
47		τ Scorpii	3.4	−27 52	46.6	14.0	16 27 41.0	8.0	35.5
48	13	A^1 Scorpii	5	−24 51	52.0	18.5	15 45 45.0	11.5	38.0
49		π Scorpii	3.4	−25 39	1.8	28.6	15 50 55.0	21.4	48.2
50		50 Libræ	6	− 7 57	4.8	29.2	15 53 53.2	17.2	41.8

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
16	13	12.38	— .626			+1	39.77	+1.10	16	11	31.98	1
16	17	34.42	— .098				.77		16	15	54.55	2
16	21	20.50	— .635	+1	39.87		.78		16	19	40.09	3
16	24	23.50	— .585				.78		16	22	43.14	4
16	27	40.00	— .655			+1	39.78	+1.10	16	25	59.57	5
14	04	49.50				+1	40.86	+0.37	14	03	08.64	6
14	10	05.48		+1	40.78		.86		14	08	24 62	7
14	12	11.24					.86		14	10	30.38	*8
14	15	37.34					.86		14	13	56.48	*9
14	26	39.50					.86		14	24	58.64	10
14	30	13.32					.86		14	28	32.46	11
14	39	43.70			40.79		.86		14	38	02.84	12
14	43	46.04			40.80		.86		14	42	05.18	*13
14	47	26.00					.86		14	45	45.14	14
14	49	52.02					.87		14	48	11.15	15
14	51	58.46					.87		14	50	17.59	*16
14	56	27.08					.87		14	54	46.21	17
14	58	03.58					.87		14	56	22.71	18
15	02	00.40					.87		15	00	19.53	19
15	04	50.80					.87		15	03	09.93	20
15	10	08.22			40.93		.87		15	08	27.35	*21
15	13	34.00					.87		15	11	53.13	22
15	17	15.90					.87		15	15	35.03	23
15	20	58.50					.87		15	19	17.63	24
15	25	37.50					.87		15	23	56.63	25
15	29	38.90		+1	41.03	+1	40.88	+0.37	15	27	58 02	26
15	02	00.60				+1	41.24	—0.23	15	00	19.36	27
15	04	51.22					.24		15	03	09.98	28
15	10	08.56		+1	41.27		.24		15	08	27.32	29
15	13	34.50					.24		15	11	53.26	30
15	17	16.38					.24		15	15	35.14	31
15	20	59.00					.21		15	19	17.76	32
15	25	37.80					.24		15	23	56.56	33
15	29	39.04			41.17		.24		15	27	57.80	34
15	34	28.98					.24		15	32	47.74	35
15	38	07.78			41.34		.24		15	36	26.54	36
15	43	06.80					.24		15	41	25.56	37
15	45	46.00					.24		15	44	04.76	38
15	49	38.52					.24		15	47	57.28	39
15	53	54.00					.24		15	52	12.76	40
15	57	53.22			41.33		.24		15	56	11.98	*41
16	07	42.36			41.19		.24		16	06	01.12	42
16	13	13.28					.24		16	11	32.04	43
16	17	36.02					.24		16	15	54.78	44
16	21	21.22		+1	41.18		.24		16	19	39.98	45
16	24	24.06					.24		16	22	42.82	46
16	27	41.02				+1	41.24	—0.23	16	25	59.78	47
15	45	45.00				+1	40.43	—0.58	15	44	04.57	48
15	50	55.00					.42		15	49	14.58	49
15	53	53.24				+1	40.42	—0.58	15	52	12.82	50

Nos. 9, 13, 16, 41. Two stars in the field of the instrument.
8, 21. Each of these stars was recorded one minute too little at transit over the middle wire.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	June 13 cont'd.	β^1 Scorpii	2	—19°22′	1.5	27.0	15 57 52.4	17.8	43.3
*2		κ^1 Herculis	5.6	+17 29	44.0	9.5	16 02 34.5	59.5	25.0
3		δ Ophiuchi	3	— 3 17	53.4	17.6	16·07 41.5	5.4	29.5
4		σ Scorpii	4	—25 12	19.1	46.0	16 13 12.4	38.8	5.6
5		ξ Cor. Bor.	5	+31 16	39 0	7.2	16 17 35.0	3.0	31.3
6		α Scorpii	1	—26 04	26.8	54.0	16 21 20.5	47.0	14.1
7		ω Ophiuchi	5	—21 07	32.0	58.0	16 24 23.5	49.0	15.0
8		τ Scorpii	3.4	—27 52	45.5	13.0	16 27 40.0	7.0	34.5
9		33 Herculis	7	+ 7 26	0.5	25.0	16 30 48.8	12.8	37.2
10		*m* Scorpii	5	—17 26	13.0	38.3	16 34 03.3	28.3	53.8
11		25 Scorpii	6	—25 14	55.0	22.0	16 38 48.2	14.4	41.4
12		Moon I	(13.9)	—27 15	21.5	59.8	16 43 27.3	54.8	23.2
13		*s* Herculis	5	+30 05	12.0	40.0	16 46 07.5	35.0	3.0
14		54 Herculis	5.6	+18 42	13.0	38.6	16 50 03.7	28 8	54.5
15		ε Herculis	3	+31 10	57.2	25.5	16 55 53.2	21.0	49.3
16		1956 A. S. C.	6	— 0 40	13.1	37 3	16 59 01.1	25.0	49.3
17		η Scorpii	4	—43 01	21.5	54.5	17 02 27.2	0.0	33.0
*18		A Ophiuchi		—26 22	21.2	48.4	17 07 15.0	41.5	8.8
19		δ Herculis	3.4	+25 02	18.0	44.6	17 10 11.0	37.5	4.0
*20		θ Ophiuchi	3.4	—24 50	2.2	29.0	17 13 55.5	22.0	48.8
21	16	B Aquilæ	5	— 8 12	57.6	22.1	19 05 46.2	10.2	34.7
22		*d* Sagittarii	5	—19 14	12 0	37.5	19 10 03.0	28.5	54.0
23		*f* Aquilæ	6	— 5 42	58.2	22.6	19 13 46.5	10.5	35.0
24		δ Aquilæ	3.4	+ 2 48	23.9	48.1	19 19 12.0	35.7	0.0
25		*c* Aquilæ	6	+ 1 38	53.5	18.0	19 22 41.6	5.3	29 8
*26		β^1 Cygni	3	+27 38	7.5	35.0	19 26 01.8	28.6	56.0
*27		h^2 Sagittarii	4.5	—25 14	51.5	18.5	19 28 44.8	11.0	38.0
28		Moon II	(17.0)	—25 10	23.3	50.6	19 31 17.7	44.8	12.2
29		φ Cygni	5	+29 47	53.5	21.5	19 34 49.0	16.5	44.5
30		γ Aquilæ	3	+10 14	36.3	1.0	19 40 25.2	49.4	14.3
31		α Aquilæ	1.2	+ 8 27	56 0	20.5	19 44 44.5	8.5	33.0
32		β Aquilæ	3.4	+ 6 01	25.0	49.2	19 49 13.2	37.2	1.5
33		*c* Sagittarii	4.5	—28 09	41.0	8.4	19 54 35.5	2.7	30.1
34	17	τ Sagittarii	4	—27 54	50.7	18.2	18 58 45.0	11.8	39.3
35		δ Aquilæ	3 4	+ 2 48	24.8	49.2	19 19 13.0	36.8	1.2
36		β^1 Cygni	3	+27 38	8.5	36.0	19 26 02.9	29.9	57.3
*37		h^2 Sagittarii	4.5	—25 14	1.6	29.4	19 28 45.8	12.2	38.9
38		φ Cygni	4	+29 47	54.8	22.8	19 34 50.2	17.5	45.5
39		γ Aquilæ	3	+10 14	37.5	2.0	19 40 26.2	50.5	15.0
40		α Aquilæ	1.2	+ 8 27	57.0	21.5	19 44 45.6	9 7	34.0
41		β Aquilæ	3.4	+ 6 01	26.0	50 3	19 49 14.2	38.6	2.5
42		*c* Sagittarii	4.5	—28 09	42.0	9.5	19 54 36.5	3.5	31.0
*43		α^2 Capricorni	3	—13 02	8 5	33.2	20 10 57.6	22.0	47.0
*44		β^2 Capricorni	3.4	—15 17	58.6	23.7	20 13 48.4	13.0	38.1
45		25 Vulpeculæ	6	+23 56	5.0	31.2	20 16 57.2	23.1	50.1
46		*f* Capricorni	6	—22 55	3.0	29 2	20 21 55.0	20.8	47.1
*47		Moon II	(18.0)	—20 52	7.9	34.6	20 24 01.2	27.7	54.5
48		η Delphini	6	+12 29	20.5	45.3	20 28 09.8	34.2	59.0
49		υ Capricorni	5	—18 42	52.8	18.2	20 32 43.6	8.9	34.3
*50		10 Delphini	6	+14 01	44.0	9.0	20 35 33.5	58.0	23.0
51		30 Vulpeculæ	6	+24 42	50.8	17.2	20 39 43.6	10.0	36.5

June 17. ☾ ☌ *f* Capricorni.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
15	57	52.40		+1	40.51	+1	40.42	—0.58	15	56	11.98	*1
16	02	34.50					.42		16	00	54.08	*2
16	07	41.48			40.30		.42		16	06	01.06	3
16	13	12.38					.42		16	11	31.96	4
16	17	35.10					.42		16	15	54.68	5
16	21	20.48		+1	40.44		.42		16	19	40.06	6
16	24	23.50					.42		16	22	43.08	7
16	27	40.00					.42		16	25	59.58	8
16	30	48.86					.41		16	29	08.45	9
16	34	03 28					.41		16	32	22.87	10
16	38	48.20					.41		16	37	07.79	11
16	43	27.32					.41		16	41	46.91	12
16	46	07.50					.41		16	44	27.09	13
16	50	03.72					.41		16	48	23.31	14
16	55	53.24					.40		16	54	12.84	15
16	59	01.16					.40		16	57	20.76	16
17	02	27.24					.40		17	00	46.84	17
17	07	14.98					.40		17	05	34.58	*18
17	10	11.02					.40		17	08	30.62	19
17	13	55.50				+1	40.40	—0.58	17	12	15.10	*20
19	05	46.16				+1	43.04	+1.05	19	04	03.12	21
19	10	03 00					.04		19	08	19.96	22
19	13	46.56					.05		19	12	03.51	23
19	19	11.94		+1	43.04		.05		19	17	28.89	24
19	22	41.64					.05		19	20	58.59	25
19	26	01.78					.05		19	24	18.73	*26
19	28	44.76					.06		19	27	01.70	*27
19	31	17.72					.06		19	29	34.66	28
19	34	49.00					.06		19	33	05.94	29
19	40	25.24			43.17		.06		19	38	42.18	30
19	44	44.50			42.99		.06		19	43	01.44	31
19	49	13.22		+1	43.03		.06		19	47	30.16	32
19	54	35.54				+1	43.07	+1.05	19	52	52.47	33
18	58	45.00				+1	44.04	+0.65	18	57	00.96	34
19	19	13.00		+1	44.08		.05		19	17	28.95	35
19	26	02.92					.06		19	24	18.86	36
19	28	45.78					.06		19	27	01.72	*37
19	34	50.16					.06		19	33	06.10	38
19	40	26.24			44.14		.06		19	38	42.18	39
19	44	45 56			44.01		.06		19	43	01.50	40
19	49	14.20			43.98		.06		19	47	30.14	41
19	54	36.50					.06		19	52	52.44	42
20	10	57.66		+1	44.09		.07		20	09	13.59	*43
20	13	48.36					.07		20	12	04.29	*44
20	16	57.22					.07		20	15	13.15	45
20	21	55.02					.07		20	20	10.95	46
20	24	01.18					.07		20	22	17.11	47
20	28	09.76					.07		20	26	25.69	48
20	32	43.56					.08		20	30	59.48	49
20	35	33.50					.08		20	33	49.42	*50
20	39	43.62				+1	44.08	+0.65	20	37	59.54	51

Nos. 1, 2. Three stars in the field of the instrument.
1, 18. Double stars.
20, 26, 27, 37, 43, 44, 50. Two stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 19	8 Piscis Aus.	5.6	−26° 53′	48.0	15.0	21 28 41.7	8.5	35.6
2		γ Capricorni	4	−17 23	10.5	36.0	21 33 01.0	26.0	51.5
*3		T^2 Pegasi	5.6	+ 4 57	14.1	38.5	21 36 02.3	26.1	50.7
4		δ Capricorni	3.4	−16 51	9.8	35.0	21 39 59.9	24.8	50.2
5		μ Capricorni	5	−14 18	32.0	57.0	21 46 21.8	46.5	11.5
6		17 Pegasi	6	+11 19	6.3	31.1	21 50 55.5	19.9	44.5
7		20 Pegasi	6	+12 21	15.5	40.2	21 55 04.8	29.3	54.0
8		α Aquarii	3	− 1 05	33.0	57.3	21 59 21.2	45.0	9.3
9		Moon II	(20.1)	−12 19	29.7	55.2	22 03 20.1	45.0	10.5
10		φ Piscis Aus.	5.6	−25 58	38.8	5.8	22 06 32.4	58.8	25.8
11		θ Aquarii	4.5	− 8 34	22.0	46.5	22 10 10.5	34.5	59.0
12		30 Pegasi	6	+ 4 59	23.5	47.6	22 14 11.7	35.7	0.0
13		50 Aquarii	6	−14 20	50.4	15.3	22 17 40.0	4.6	29.5
14		H^1 Pegasi	5.6	+ 3 35	27.5	52.0	22 20 16.0	40.0	4.5
15		σ Aquarii	5	−11 29	9.0	33.5	22 23 57.8	22.0	47.0
16		ζ Pegasi	3	+10 00	27.1	51.8	22 35 16.0	40.2	5.0
17		η Pegasi	3	+29 23	22.3	50.0	22 37 17.2	44.4	12.1
18		λ Aquarii	4	− 8 26	14.5	39.0	22 46 03.0	27.0	51.5
19		α Piscis Aus.	1	−30 28	40.0	8.0	22 50 35.5	3.0	31.0
20		α Pegasi	2	+14 21	45.0	10.0	22 58 34.6	59.2	24.2
21	20	θ Aquarii	4.5	− 8 34	22.3	46.8	22 10 10.8	34.8	59.3
22		30 Pegasi	5	+ 4 59	24.0	48.0	22 14 12.0	36.0	0.0
23		50 Aquarii	6	−14 20	50.6	15.6	22 17 40.5	5.3	30.3
24		H^1 Pegasi	6	+ 3 35	28.0	52.5	22 20 16.2	40.0	4.5
25		σ Aquarii	5	−11 29	9.2	34.0	22 23 58.3	22.7	47.5
26		ν Aquarii	5.6	−21 31	52.5	18.5	22 27 44.0	9.5	35.5
27		κ Aquarii	6	− 5 03	27.3	52.0	22 31 16.0	40.0	4.5
28		ζ Pegasi	3	+10 00	27.5	52.3	22 35 16.3	40.2	5.1
29		η Pegasi	3	+29 23	22.5	50.2	22 37 17.5	44.7	12.5
30		λ Aquarii	4	− 8 26	15.2	39.5	22 46 03.5	27.5	52.0
31		α Piscis Aus.	1	−30 28	40.2	8.2	22 50 36.0		
32		Moon II	(21.1)	− 6 29	12.6	37.7	22 51 02.0	26.3	51.3
33		α Pegasi	2	+14 21	45.2	10.0	22 58 34.9	59.7	24.5
34	23	α Cor. Bor.	2	+27 15	51.8	18.5	15 29 45.8	18.0	40.0
35		α Serpentis	2.3	+ 6 56	26.2	50.8	15 38 14.8	38.4	3.0
36		b Scorpii	5	−25 16	20.8	47.5	15 43 14.0	40.5	7.2
37		A^1 Scorpii	5	−24 51	0.0	26.5	15 45 53.0	19.5	46.0
38		π Scorpii	3.4	−25 39	9.6	36.6	15 51 03.2	29.6	56.6
39		50 Libræ	6	− 7 57	12.8	37.2	15 54 01.2	25.2	49.8
*40		β^1 Scorpii	2	−19 22	9.2	35.0	15 58 00.3	25.5	51.2
41		g^1 Serpentis	6	+10 19	1.5	26.3	16 01 50.7	15.0	39.6
*42		δ Ophiuchi		− 3 17	1.0	25.5	16 07 49.5	13.5	37.8
43	July 4	54 Herculis	5.6	+18 42	30.0	53.0	16 49 16.0	39.0	2.0
44		s Ophiuchi	6	−18 38			16 53 26.5	49.4	12.2
45		32 Ophiuchi	5.6	+14 20	59.2	21.5	16 56 44.0	6.3	28.6
46		1959 A. S. C.	6	− 0 52	11.2	32.6	17 00 54.4	16.3	38.0
*47		A Ophiuchi	5.6	−26 21	39.5	3.7	17 06 28.0	52.3	16.2
48		δ Herculis	4	+25 02	35.5	59.2	17 09 23.6	47.0	11.2
*49		θ Ophiuchi	3.4	−24 50	20.3	44.0	17 13 08.3	32.0	56.0
50		b Ophiuchi	5.6	−24 01	45.6	9.1	17 17 33.0	56.8	20.5

June 24.—Two of the wires were found to have been broken. Took out and redivided the diaphragm into spaces of .10 inch, by the straight line engine of Mr. R. Patten. Several systems of wires were put in before obtaining a satisfactory one. Set the chronometer back one minute.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
21	28	41.76	— .460			+1	44.49	+0.20	21	26	56.81	1
21	33	01.00	— .392				.50		21	31	16.11	2
21	36	02.34	— .252				.50		21	34	17.59	*3
21	39	59.94	— .389				.50		21	38	15.05	4
21	46	21.76	— .372				.50		21	44	36.89	5
21	50	55.46	— .212				.50		21	49	10.75	6
21	55	04.76	— .206				.50		21	53	20.05	7
21	59	21.16	— .289	+1	44.39		.50		21	57	36.37	8
22	03	20.10	— .359				.50		22	01	35.24	9
22	06	32.32	— .453				.50		22	04	47.37	10
22	10	10.50	— .335				.50		22	08	25.67	11
22	14	11.70	— .252				.50		22	12	26.95	12
22	17	39.96	— .372				.50		22	15	55.09	13
22	20	16.00	— .261				.50		22	18	31.24	14
22	23	57.86	— .254				.50		22	22	13.01	15
22	35	16.02	— .221		44.51		.50		22	33	31.30	16
22	37	17.20	— .085				.50		22	35	32.62	17
22	46	03.00	— .334				.50		22	44	18.17	18
22	50	35.50	— .489		44.57		.50		22	48	50.51	19
22	58	34.60	— .193	+1	44.55	+1	44.50	+0.20	22	56	49.91	20
22	10	10.80	— .596			+1	44.60	+0.10	22	08	25.60	21
22	14	12.00	— .448				.60		22	12	26.95	22
22	17	40.46	— .662				.60		22	15	55.20	23
22	20	16.24	— .463				.60		22	18	31.18	24
22	23	58.34	— .629				.60		22	22	13.11	25
22	27	44.00	— .747				.60		22	25	58.65	26
22	31	15.96	— .558				.60		22	29	30.80	27
22	35	16.28	— .392	+1	44.56		.60		22	33	31.23	28
22	37	17.48	— .150				.60		22	35	32.73	29
22	46	03.54	— .595				.60		22	44	18.35	30
22	50	35.96	— .869		44.62		.60		22	48	50.49	31
22	51	01.98	— .573				.60		22	49	16.81	32
22	58	34.86	— .344	+1	44.63	+1	44.60	+0.10	22	56	49.92	33
15	29	45.82	— .101	+1	47.91	+1	47.92	+1.23	15	27	57.80	34
15	38	14.64	— .240		47.95		.92		15	36	26.48	35
15	43	14.00	— .448				.93		15	41	25.62	36
15	45	53.00	— .445				.93		15	44	04.63	37
15	51	03.12	— .450				.93		15	49	14.74	38
15	54	01.24	— .332				.93		15	52	12.98	39
15	58	00.24	— .405		47.91		.93		15	56	11.91	*40
16	01	50.62	— .219				.93		16	00	02.47	41
16	07	49.46	— .302	+1	47.95	+1	47.94	+1.23	16	06	01.22	*42
16	49	16.00	— .073			+0	52.60	+0.95	16	48	23.33	43
16	53	26.62	— .178				.60		16	52	33.84	44
16	56	43.92	— .086				.61		16	55	51.22	45
17	00	54.50	— .128				.61		17	00	01.76	46
17	06	27.94	— .203				.62		17	05	35.12	*47
17	09	23.30	— .053				.62		17	08	30.63	48
17	13	08.12	— .197				.62		17	12	15.30	*49
17	17	33.00	— .195			+0	52.62	+0.95	17	16	40.19	50

Nos. 3, 40, 49. Two stars in the field of the instrument.
42. Recorded 16*h.* 8*m.* at transit over midddle wire.
47. A double star.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 4	υ Scorpii	3.4	—37°09′	56.5	23.5	17 20 51.0		
2	cont'd.	λ Herculis	4.5	+26 14	23.8	47.8	17 25 12.3	36.5	0.5
3		α Ophiuchi	2	+12 41	42.0	4.0	17 28 26.5	49.0	11.0
4		κ Scorpii	3	—38 56	27.0	55.0	17 32 23.2	51.0	19.0
5	5	α Serpentis	2.3	+ 6 56	36.4	58.1	15 37 20.1	42.1	3.6
6		b Scorpii	5	—25 16	31.3	55.1	15 42 19.5	43.2	7.1
7		A¹ Scorpii	5	—24 51	10.3	34.2	15 44 58.3	22.2	46.0
8		π Scorpii	3.4	—25 39	20.0	44.0	15 50 08.2	32.5	56.2
*9		β¹ Scorpii	2	—19 22	19.6	42.8	15 57 05.5	28.8	51.5
10		δ Ophiuchi	3	— 3 17	11.0	33.0	16 06 54.8	16.6	38.0
11	7	α Herculis	3.4	+14 35	37.0	59.1	17 08 21.6	44.1	6.1
12		θ Ophiuchi	3.4	—24 50	25.0	48 5	17 13 12.5	36.5	0.0
13		b Ophiuchi	5.6	—24 01	50.1	13.6	17 17 37.3	1.0	24.5
14		e² Ophiuchi	5	—23 50	53.6	17.0	17 22 40.7	4.4	27.8
15		α Ophiuchi	2	+12 41	46.6	8.6	17 28 31.0	53.3	15.3
16	9	ε Bootis	3	+27 45	10.5	34.5	14 38 59.2	23.8	47.8
17		β Libræ	2.3	— 8 47	40.1	1.6	15 09 23.8	46.0	7.1
18		9 Serpentis	5.6	+16 00	36.8	59.0	15 19 21.6	44.3	6.2
19		α Cor. Bar.	2	+27 15	6.2	30.0	15 28 54.3	18.8	42.6
20	10	φ² Lupi	5	—36 17	2.8	29.2	15 13 56.2	23.2	49.5
21		9 Serpentis	5.6	+16 00	35.5	57.9	15 19 20.3	42.8	5.0
22		ζ³ Libræ	6.7	—16 03	53.0	15.3	15 22 38.0	0.6	23.0
23		11 Serpentis	6	— 0 38	58.9	20.4	15 25 42.0	3.6	25.0
24		α Cor. Bor.	2	+27 15	4.6	28.9	15 28 53.1	17.4	41.7
25		τ³ Serpentis	6	+16 33	51.2	13.0	15 34 36.0	58.7	21.0
26		α Serpentis	2.3	+ 6 56	38.8	0.0	15 37 21.9	43.8	5.0
27		b Scorpii	5	—25 16	33.5	57.0	15 42 20.9	44.8	8.3
28		A¹ Scorpii	5	—24 51	12.5	36.0	15 45 00.0	24.0	47.5
29		δ Scorpii	3	—22 10	5.3	28.3	15 51 51.9	15.5	38.5
*30		β¹ Scorpii	2	—19 22	22.0	44.5	15 57 07.5	30.5	53.0
*31		47 Serpentis	6	+ 8 57	0.0	22.0	16 01 44.0	6.0	28.0
32		δ Ophiuchi	3	— 3 17	12.4	34.5	16 06 56.5	18.5	40.5
33		σ Scorpii	4	—25 12	39.7	3.5	16 12 27.5	51.5	15.3
34		ξ Cor. Bor.	5	+31 16	0.0	25.0	16 16 50.5	16.0	41.0
35		α Scorpii	1	—26 04	47.8	11.5	16 20 35.6	59.7	23.5
36		Moon I	(11.5)	—26 44	26.3	51.0	16 24 16.3	41.5	6.1
37		τ Scorpii	3.4	—27 53	6.2	30.6	16 26 55.4	20.2	44.5
38	11	α Scorpii	1	—26 04	46.8	10.5	16 20 31.6	58.8	22.5
39		τ Scorpii	3.4	—27 53	5.5	29.6	16 26 54.4	19.1	43.2
40		33 Herculis	7	+ 7 26	19.0	41.0	16 30 03.0	25.0	47.0
41		1908 A. S. C.	6.7	—28 12	9.7	34.0	16 35 58.6	23.2	47.5
42		i Herculis	5	+ 8 53	23.0	44.6	16 39 06.7	28.8	50.3
43		k Herculis	5.6	+ 7 32	47.5	9.0	16 43 31.0	53.0	14.3
44		1934 A. S. C.	6	—16 33	1.0	23 0	16 47 46.0	8.8	31.0
45		κ Ophiuchi	4	+ 9 38	19.8	41.2	16 51 03.2	25.3	47.0
46		ε Herculis	3	+31 10	17.3	42.3	16 55 07.6	33.0	58.0
47		60 Herculis	5	+12 58	11.0	32.9	16 58 55.1	17.4	39.2
48		29 Scorpii	6.7	26 47	26.6	51.0	17 05 15.2	39.4	3.8

July 10. ☽ ☌ τ Scorpii.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
17	20	50.92	— .243			+0	52.63	+0.95	17	19	58.05	1
17	25	12.18	— .049				.63		17	24	19.50	2
17	28	26.50	— .091	+0	52.63		.63		17	27	33.78	3
17	32	23.04	— .251			+0	52.63	+0.95	17	31	30.16	4
15	37	20.06	— .079	+0	53.58	+0	53.51	+1.62	15	36	26.47	5
15	42	19.34	— .149				.51		15	41	25.68	6
15	44	58.20	— .148				.51		15	44	04.54	7
15	50	08.18	— .150				.52		15	49	14.51	8
15	57	05.64	— .135		53.59		.53		15	56	11.97	*9
16	06	54.68	— .102	+0	53.39	+0	53.54	+1.62	16	06	01.04	10
17	08	21.58	— .064	+0	57.05	+0	57.07	+0.71	17	07	24.45	11
17	13	12.50	— .148				.07		17	12	15.28	12
17	17	37.30	— .146				.07		17	16	40.08	13
17	22	40.70	— .145				.07		17	21	43.49	14
17	28	30.96	— .067	+0	57.09	+0	57.07	+0.71	17	27	33.82	15
14	39	59.16		+0	56.51	+0	56.59	—1.26	14	38	02.57	16
15	09	23.72			56.52		.57		15	08	27.15	17
15	19	21.58					.57		15	18	25.01	18
15	28	54.38		+0	56.69	+0	56.56	—1.26	15	27	57.82	19
15	13	56.18	— .095			+0	55.46	—1.20	15	13	00.63	20
15	19	20.30	— .032				.45		15	18	24.82	21
15	22	37.98	— .068				.45		15	21	42.46	22
15	25	41.98	— .050				.45		15	24	46.48	23
15	28	53.14	— .018	+0	55.44		.44		15	27	57.68	24
15	34	36.10	— .082				.44		15	33	40.63	25
15	37	21.90	— .042		55.49		.44		15	36	26.42	26
15	42	20.90	— .078				.43		15	41	25.39	27
15	45	00.00	— .079				.43		15	44	04.49	28
15	51	51.90	— .075				.43		15	50	56.40	29
15	57	07.50	— .071		55.53		.43		15	56	12.00	*30
16	01	44.00	— .040				.43		16	00	48.53	*31
16	06	56.48	— .053		55.25		.42		16	06	01.01	32
16	12	27.50	— .078				.42		16	11	32.00	33
16	16	50.50	— .012				.41		16	15	55.08	34
16	20	35.62	— .080	+0	55.45		.41		16	19	40.13	35
16	24	16.24	— .082				.41		16	23	20.75	36
16	26	55.38	— .083			+0	55.40	—1.20	16	25	59.90	37
16	20	34.64	— .452	+0	54.10	+0	54.15	—1.15	16	19	40.04	38
16	26	54.36	— .468				.14		16	25	59.75	39
16	30	03.00	— .238				.14		16	29	08.62	40
16	35	58.60	— .469				.13		16	35	04.00	41
16	39	06.68	— .227				.13		16	38	12.32	42
16	43	30.96	— .230				.13		16	42	36.60	43
16	47	46.02	— .386				.12		16	46	51.51	44
16	51	03.30	— .223				.12		16	50	08.96	45
16	55	07.64	— .072				.12		16	54	13.45	46
16	58	55.12	— .184				.12		16	58	00.87	47
17	05	15.20	— .459			+0	54.12	—1.15	17	04	20.62	48

Nos. 9, 30. A double star.
31. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 11	α Herculis	3.4	+14°35′	34.1	56.3	17 08 18.8	41.2	3.2
2	cont'd.	ρ Ophiuchi	4 5	—20 57	37.2	0.1	17 12 23.4	46.8	9.4
3		a Herculis	5.6	+24 40	28.9	52.4	17 15 16.2	40.2	3.6
4		Moon I	(12.5)	—27 55	24.0	49.0	17 19 14.5	40.0	5.0
5		e² Ophiuchi	5	—23 50	50.8	14.0	17 22 37.7	1.5	24.8
6		α Ophiuchi	2	+12 41	43.9	5.9	17 28 28.2	50.5	12.5
7		ν Serpentis	4.5	—12 47	39.4	1.1	17 33 23.5	45.7	7.5
8		3 Sagittarii	5	—27 46	39.6	3.6	17 38 28.2	52.8	16.8
9		μ Herculis	4	+27 49	20.4	44.6	17 41 09.3	34.0	58.2
10		z Ophiuchi	6.7	—24 51	14.2	37.8	17 46 01.6	25.5	49.2
11		2052 A. S. C.	5	—30 14	57.8	22.6	17 49 47.7	12.8	37.5
12	12	δ Scorpii	3	—22 10	3.5	26.5	15 51 50.1	13.5	36.5
13		β¹ Scorpii	2	—19 22	20.0	42.4	15 57 05.5	28.5	51.0
14		e² Ophiuchi	5	—23 50	50.0	13.5	17 22 37.1	0.8	24.3
15		α Ophiuchi	2	+12 41	43.2	5.0	17 28 27.1	49.3	11.2
16		ν Serpentis	4.5	—12 47	38.5	0.5	17 33 22.8	45.0	7.0
17		3 Sagittarii	5	—27 46	39.0	3.0	17 38 27.4	51.9	16.1
18		μ Herculis	4	+27 49	19.7	44.0	17 41 08.5	33.0	57.2
19		z Ophiuchi	6.7	—24 51	18.5	37.0	17 46 01.1	25.2	48.6
*20		2052 A. S. C.	5	—30 14	57.0	22.0	17 49 47.0	12.0	37.0
21		2085 A. S. C.	5	—28 28	6.0	30.3	17 58 55.0	19 7	44.0
22		μ¹ Sagittarii	3.4	—21 05	23.0	46.0	18 05 09.2	32.5	55.5
23		δ Sagittarii	3.4	—29 53	53.4	18.0	18 11 43.1	8.2	32.8
24		Moon I	(13.6)	—27 39	10.2	35.0	18 15 00.6	26.2	51.0
25		λ Sagittarii	4	—25 30	15.8	39.4	18 19 03.6	27.7	51.2
26		H Herculis	6	+23 46	7.2	30.6	18 23 54.5	18.3	41.6
27		m Aquilæ	5	— 8 21	43.6	5.1	18 27 27.2	49.3	10.6
28		φ Sagittarii	4.5	—27 09	49.2	13.0	18 36 37.5	2.0	25.7
29		σ Sagittarii	3	—26 29	30.2	54.2	18 46 18.4	42.6	6.5
30	13	H Herculis	6	+23 46	6.0	29.4	18 23 53.2	17.0	40.2
31		m Aquilæ	5	— 8 21	42.5	4.0	18 27 26.0	48.0	9.3
32		26 Sagittarii	6	—23 58	15.2	38.2	18 33 02.3	26.3	49.3
33		φ Sagittarii	4.5	—27 09	47.3	11.5	18 36 36.0	0.5	24.7
34		r Sagittarii	6	—20 30	20.6	43.2	18 41 06.5	29.8	52.4
35		σ Sagittarii	3	—26 29	28.8	53.0	18 46 17.1	41.2	5.5
*36		64 Serpentis	6	+ 2 20	26.2	47.8	18 50 09.5	31.4	52.8
37		i Aquilæ	5.6	— 5 57	20.7	42.2	18 54 04.0	26.0	47.5
38		ζ Aquilæ	3	+13 38	14.6	36.5	18 58 58.9	21.3	43.0
39		2224 A. S. C.	6.7	—21 55	4.1	27.0	19 03 50.5	14.0	36.8
40		Moon I	(14.6)	—25 59	27.9	52.5	19 10 17.5	42.5	7.0
41		f¹ Aquilæ	6	— 5 42	13.0	34.3	19 12 56.1	18.0	39.3
*42		χ¹ Sagittarii	6	—24 49	40.7	4.5	19 16 28.4	52.3	15.8
43		Aquilæ	6	+ 2 44	31.0	52.3	19 21 14.3	36.3	57.6
*44		h² Sagittarii	4.5	—25 14	6.5	30.2	19 27 54.2	18.2	41.8
45	14	B Aquilæ	5	— 8 12	11.5	33.0	19 04 55.1	17.2	38.8
*46		d Sagittarii	5	—19 14	26.0	48.8	19 09 11.9	35.0	57.5
47		χ¹ Sagittarii	6	—24 49	40.3	4.0	19 16 28.0	51.5	15.7
48		δ Aquilæ	3.4	+ 2 48	37.5	59.0	19 18 20.9	42.8	4.5
49		Aquilæ	6	+ 2 44	30.5	52.0	19 21 13.8	35.6	57.0
*50		β¹ Cygni	3	+27 38	22.0	46.3	19 25 10.8	35.3	59.5

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
17	08	18.72	— .192	+0	54.06	+0	54.12	—1.15	17	07	24.41	1
17	12	23.38	— .418				.11		17	11	28.85	2
17	15	16.26	— .121				.11		17	14	22.08	3
17	19	14.50	— .468				.11		17	18	19.92	4
17	22	37.76	— .438				.11		17	21	43.21	5
17	28	28.20	— .201	+0	54.20		.10		17	27	33.90	6
17	33	23.44	— .368				.10		17	32	28.98	7
17	38	28.20	— .468				.10		17	37	33.63	8
17	41	09.30	— .108				.09		17	40	15.11	9
17	46	01.66	— .426				.09		17	45	07.14	10
17	49	47.68	— .487			+0	54.09	—1.15	17	48	53.10	11
15	51	50.00	— .567			+0	53.11	—1.00	15	50	56.32	12
15	57	05 48	— .540	+0	53.05		.11		15	56	11.83	13
17	22	37.14	— .581				.05		17	21	43.51	14
17	28	27.16	— .331		53.04		.05		17	27	33.78	15
17	33	22.76	— .482				.05		17	32	29.23	16
17	38	27.48	— .622				.04		17	37	33.82	17
17	41	08.48	— .130				.04		17	40	15.31	18
17	46	01.08	— .593				.04		17	45	07.45	19
17	49	47.00	— .649				.04		17	48	53.31	*20
17	58	55.00	— .631				.03		17	58	01.34	21
18	05	09.24	— .556	+0	53.02		.03		18	04	15·65	22
18	11	43.10	— .645				.02		18	10	49.44	23
18	15	00.60	— .621				.02		18	14	06.96	24
18	19	03.54	— .600				.02		18	18	09.92	25
18	23	54.44	— .171				.01		18	23	01.26	26
18	27	27.16	— .445				.01		18	26	33.71	27
18	36	37.49	— .617				.00		18	35	43.86	28
18	46	18.38	— .609			+0	53.00	—1.00	18	45	24.77	29
18	23	53.16	— .026			+0	52.14	—0.85	18	23	00.99	30
18	27	25.96	— .040				.13		18	26	33.79	31
18	33	02.26	— .090				.13		18	32	10.04	32
18	36	36.00	— .092				.13		18	35	43.78	33
18	41	06.50	— .083				.13		18	40	14.29	34
18	46	17.12	— .091				.12		18	45	24.91	35
18	50	09.54	— .054				.12		18	49	17.37	*36
18	54	04.08	— .064				.12		18	53	11.90	37
18	58	58.86	— .042	+0	52.11		.12		18	58	06.70	38
19	03	50.48	— .085				.12		19	02	58.28	39
19	10	17.48	— .091				.12		19	09	25.27	40
19	12	56.14	— .064				.12		19	12	03.96	41
19	16	28.34	— .089				.11		19	15	36.14	*42
19	21	14.30	— .054				.11		19	20	22.14	43
19	27	54.18	— .090			+0	52.11	—0.85	19	27	01.98	*44
19	04	55.12	— .053			+0	51.45	—0.34	19	04	03.62	45
19	09	11.84	— .063				.45		19	08	20.33	*46
19	16	27.70	— .069				.45		19	15	36.18	47
19	18	20.94	— .041	+0	51.59		.45		19	17	29.45	48
19	21	13.78	— .041				.45		19	20	22.29	49
19	25	10.78	— .015			+0	51.45	—0.34	19	24	19.32	*50

No. 20. A triple star.
36. Three stars in the field of the instrument.
42, 44, 46, 50. Two stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 14	σ Aquilæ	6	+ 5°02′	29.5	51.0	19 32 12.6	34.5	56.0
2	cont'd.	β Sagittæ	5	+17 07	1.5	23.5	19 34 46.5	9.2	31.2
3		γ Aquilæ	3	+10 14	50.1	12.0	19 39 34.0	56.0	18.0
4		α Aquilæ	1.2	+ 8 27	10.0	31.4	19 43 53.4	15.5	36.8
5		β Aquilæ	3.4	+ 6 01	38.8	0.1	19 48 22.0	44.0	5.4
*6		h Vulpeculæ	6	+24 30	21.7	45.2	19 56 09.0	33.0	56.5
7		i Vulpeculæ	5.6	+23 10	8.6	32.0	20 00 55.8	19.5	42.2
8		Moon II	(15.6)	—23 01	29.4	53.2	20 06 17.2	41.2	5.0
*9		α^1 Capricorni	4	—13 00	57.5	19.5	20 09 41.6	3.6	25.6
*10		β^2 Capricorni	3.4	—15 17	11.5	34.0	20 12 56.4	18.7	41.0
11		π Capricorni	5	—18 44	18.8	42.0	20 19		50.0
12		i Cygni	4.5	+29 50	56.4	21.1	20 23 46.3	11.5	36.3
13		η Delphini	6	+12 29	33.6	55 5	20 27 17 8	40.0	2.0
14		υ Capricorni	5	—18 42	5.8	28.5	20 31 51.7	14.8	37.5
15	15	α Aquilæ	1.2	+ 8 27	9.8	31.4	19 43 53 5	15.6	37.3
16		β Aquilæ	3.4	+ 6 01	39.0	0.1	19 48 22.1	44.1	5.3
*17		α^2 Capricorni	3	—13 02	21.5	43.6	20 10 05.7	28.0	50.2
*18		β^2 Capricorni	3.4	—15 17	11.6	33.9	20 12 56.4	19.0	41.2
19		π Capricorni	5	—18 44	19.0	42.0	20 19 05.0	28.0	51.0
*20		i Cygni	4.5	+29 50	56.4	21.2	20 23 46.0	11.0	35.8
21		η Delphini	6	+12 29	33.5	55.4	20 27 17.7	40.0	2.0
22		υ Capricorni	5	—18 42	6.0	28.5	20 31 51.5	14.5	37.0
23		δ Delphini	5	+14 30	9.4	31.6	20 36 54.1	16.6	38.8
24		α Microscopi	4.5	—34 22	1.2	27.1	20 40 53.5	20.0	45.8
*25		5 Aquarii	6	— 6 06	52.5	14.0	20 44 35.8	57.5	19.0
*26		q Vulpeculæ	4.5	+27 27	50.4	14.5	20 48 39.0	3.5	27.5
27		x Vulpeculæ	5.6	+21 43	15.5	38.4	20 52 01.4	24.3	47.0
28		Moon II	(16.7)	—18 54	6.5	29.6	20 57 53.3	17.0	40.0
29		ν Aquarii	5	—12 01	3.2	25.2	21 01 47.4	9.4	31.5
30		ζ Cygni	3	+29 34	12.6	37.2	21 07 02.2	27.2	51.8
31		31 Capricorni	7	—18 08	28.0	50 4	21 10 13.2	36.0	58.2
32		ι Capricorni	5	—17 31	29.9	52.0	21 14 15.0	38.0	0.0
33		ζ Capricorni	4	—23 06	40.0	3.0	21 18 26.7	50.4	13.3
34		β Aquarii	3	— 6 16	19.2	40.9	21 24 02.7	24.4	46.2
35		ε Capricorni	5	—20 11	16.0	39.0	21 29 02.1	25.2	48.0
36	16	ζ Capricorni	4	—23 06	39.0	2.5	21 18 26.1	49.7	13.0
37		β Aquarii	3	— 6 16	19.0	40.3	21 24 02.1	24.0	45.3
38		ε Capricorni	5	—20 11	15.5	38.3	21 29 01.6	24.9	48.0
39		d^1 Capricorni	6	—14 45	0.4	22.5	21 33 45.0	7.5	29.6
40		ε Pegasi	2.3	+ 9 09	30.0	51.7	21 37 13.7	35.8	57.5
41		11 Pegasi	5.6	+ 1 57	18.0	39.2	21 40 01.0	22.8	44.0
42		μ Capricorni	5	—14 18	43.8	6.0	21 45 28.3	50.6	13.0
43		Moon II	(17.7)	—13 53	39.0	1.9	21 47 24.6	47.5	10.5
44	17	ζ Cygni	3	+29 34	11.5	36.0	21 07 01.0	26.0	50.5
45		ι Capricorni	5	—17 31	28.5	51.0	21 14 13.8	36.6	59.0
46		β Aquarii	3	— 6 16	18.0	39.7	21 24 01.5	23.3	45.0
47		ε Capricorni	5	—20 11	14.8	37.5	21 29 00.6	23.8	46.7
48		ε Pegasi	2.3	+ 9 09	29.1	51.0	21 37 13.1	35.1	57.0
49		μ Capricorni	5	—14 18	43.0	5.0	21 45 27.6	50.2	12.0
50		x Aquarii	6	—17 44	49.0	11.6	21 54 34.4	57.2	19.7

July 14.—Passing cumuli.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
19	32	12.72	— .039			+0	51.45	—0.34	19	31	21.23	1
19	34	46.38	— .027				.45		19	33	54.90	2
19	39	34.02	— .034	+0	51.47		.45		19	38	42.54	3
19	43	53.42	— .035		51.41		.45		19	43	01.94	4
19	48	22.06	— .038	+0	51.35		.45		19	47	30.57	5
19	56	08.88	— .019				.45		19	55	17.41	*6
20	00	55.62	— .021				.45		20	00	04.15	7
20	06	17.20	— .067				.45		20	05	25.68	8
20	09	41.58	— .057				.45		20	08	50.07	*9
20	12	56.32	— .059				.44		20	12	04.82	*10
20	19	04.56	— .062				.44		20	18	13.06	11
20	23	46.32	— .013				.44		20	22	54.87	12
20	27	17.78	— .032				.44		20	26	26.31	13
20	31	51.66	— .062			+0	51.44	—0.34	20	31	00.16	14
19	43	53.52		+0	51.52	+0	51.43	—0.32	19	43	02.09	15
19	48	22 12			51.34		.42		19	47	30.70	16
20	10	05.80			51.67		.42		20	09	14.38	*17
20	12	56.42					.42		20	12	05.00	*18
20	19	05.00					.42		20	18	13.58	19
20	23	46.08					.42		20	22	54.66	*20
20	27	17.72					.42		20	26	26.30	21
20	31	51.50					.42		20	31	00.08	22
20	36	54.10					.42		20	36	02.68	23
20	40	53.52					.42		20	40	02.10	24
20	44	35.76					.42		20	43	44.34	*25
20	48	38.98					.42		20	47	47.56	*26
20	52	01.32					.42		20	51	09.90	27
20	57	53.28					.42		20	57	01.86	28
21	01	47.34					.42		21	00	55.92	29
21	07	02.20			51.32		.42		21	06	10.78	30
21	10	13.16					.42		21	09	21.74	31
21	14	14.98					.41		21	13	23.57	32
21	18	26.68					.41		21	17	35.27	33
21	24	02.68		+0	51.23		.41		21	23	11.27	34
21	29	02.06				+0	51.41	—0.32	21	28	10.65	35
21	18	26.08	+ .095			+0	50.77	—0.70	21	17	35.40	36
21	24	02.14	+ .071	+0	50.74		.77		21	23	11.44	37
21	29	01.66	+ .091				.77		21	28	10.98	38
21	33	45.00	+ .083				.77		21	32	54.31	39
21	37	13.74	+ .036	+0	50.81		.77		21	36	23.01	40
21	40	01.00	+ .060				.77		21	39	10.29	41
21	45	28.34	+ .083				.77		21	44	37.65	42
21	47	24.70	+ .082			+0	50.77	—0.70	21	46	34.01	43
21	07	01.00	— .018	+0	50.06	+0	50.03	—0.88	21	06	10.95	44
21	14	13.78	— .087				.02		21	13	23.67	45
21	24	01.50	— .071		49.95		.02		21	23	11.41	46
21	29	00.68	— .091				.01		21	28	10.58	47
21	37	13.06	— .050	+0	50.02		.01		21	36	23.00	48
21	45	27.56	— .083				.00		21	44	37,48	49
21	54	34.38	— .088			+0	50.00	—0.88	21	53	44.29	50

Nos. 6, 9, 10, 17, 18, 20, 25, 26. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 17	ι Aquarii	4.5	—14°38′	56.1	18.5	21 58 41.0	3.5	26.0
2	cont'd.	37 Aquarii	6	—11 36	8.6	30.8	22 02 58.0	15.0	37.0
3		λ Piscis Aus.	6	—28 33	18.8	43.0	22 06 07.8	32.6	56.8
4		θ Aquarii	4.5	— 8 35	33.0	54.6	22 09 16.5	38.5	0.2
5		30 Pegasi	5	+ 4 59	34.3	56.0	22 13 17.5	39.1	1.5
6		π Aquarii	5	+ 0 34	16.0	37.6	22 17 59.2	21.0	42.6
*7		ζ Aquarii	5	— 0 50	45.5	7.0	22 21 28.6	50.2	12.0
8		K Pegasi	6	+19 24	58.8	21.6	22 25 44.6	7.6	30.5
9		κ Aquarii	5	— 5 03	38.0	59.5	22 30 21.2	43.0	4.5
10		Moon II	(18.7)	— 8 11	41.0	3.0	22 35 25.6	48.2	10.2
11		λ Pegasi	4.5	+22 44	56.0	19.0	22 39 42.6	6.2	29.0
12		λ Aquarii	4	— 8 26	25.3	47.0	22 45 09.0	31 0	52.8
13		α Piscis Aus.	1	—30 28	51.5	16.5	22 49 41.7	7.0	32.0
14		x^2 Piscium	6	— 0 40	35.4	56.8	22 53 18.5	40.3	1.8
15		α Pegasi	2	+14 21	56.0	18.1	22 57 40.3	2.6	24.8
16	19	A^3 Aquarii	5.6	—19 10	59.0	22.0	28 36 45.0	8.0	31.0
17		n Piscium	5.6	— 3 39	50.5	12.0	23 40 33.7	55.5	17.0
18		22 Piscium	6	+ 2 02	54.0	15.5	23 44 37.3	59.0	20.5
19		p Piscium	5	— 4 26	36.5	58.0	23 51 19.7	41.5	3.0
20		c^2 Piscium	6	+ 7 36	26.5	48.0	23 55 10.0	32.0	53.5
21		α Andromedæ	1	+28 12	9.3	33.6	0 00 58.1	22.7	47.0
22		γ Pegasi	2.3	+14 18	6.1	28.2	0 05 50.7	13.1	35.2
23		Moon II	(20.8)	+ 4 19	6.6	28.6	0 10 51.0	13.3	35.4
24		d Piscium	5.6	+ 7 18	29.0	50.7	0 13 12.7	34.8	56.5
25		α Phœnicis	2	—43 10	13.7	43.0	0 19 12.9	42.8	12.0
26		n Ceti	6	— 4 50	59.5	21.0	0 22 42.7	4.5	26.0
27		49 A. S. C.	6.7	+12 29	44.0	6.0	0 27 28.2	50.5	12.5
28		δ Andromedæ	3	+29 59	47.6	12.3	0 31 37.1	1.8	26.5
29		β Ceti	2.3	—11 29	38.2	1.0	0 36 24.0	46.9	9.7
30		δ Piscium	5	+ 6 43	30.0	51.5	0 41 13.5	35.5	57.0
31	20	c^2 Piscium	6	+ 7 36	27.3	49.0	28 55 11.0	33.0	54.8
32		α Andromedæ	1	+28 12	10.4	34.7	0 00 59.3	24.0	48.3
33		γ Pegasi	2.3	+14 18	7.5	29.6	0 05 51.9	14.3	36.4
34		d Piscium	5.6	+ 7 18	30.5	52.0	0 13 13.8	35.7	57.2
35		n Ceti	6	— 4 50	0.6	22.3	0 22 44.0	5.8	27.5
36		49 A. S. C.	6.7	+12 29	45.2	7.0	0 27 29.4	51.8	13.7
37		δ Andromedæ	3	+29 59	49 0	13.5	0 31 38.7	4.0	28.5
38		β Ceti	2.3	—11 29	39.4	2.1	0 36 25.0	48.0	10.6
39		δ Piscium	5	+ 6 43	31.0	52.7	0 41 14.7	36.7	58.5
40		m Ceti	5	— 2 01	58.4	19.6	0 45 41.5	3.4	24.7
41		η Andromedæ	5	+22 38	45.0	8.3	0 49 32.0	55.6	18.7
42		ε Piscium	4	+ 7 02	46.6	8.2	0 55 30.2	52.2	13.8
43		Moon II	(21.8)	+10 38	2.5	25.0	1 00 47.5	10.0	32.5
44		θ^1 Ceti	3	— 9 00	9.0	30.8	1 16 52.8	15.0	36.6
45	24	φ Sagittarii	4.5	—27 09	48.5	12.5	18 36 37.0	1.5	25.5
46		r Sagittarii	6	—20 30	21.5	44.2	18 41 07.5	30.8	53.5
47		σ Sagittarii	3	—26 29	29.8	53.5	18 46 18.0	42.5	6.3
48		i Aquilæ	5.6	— 5 57	21.6	43.0	18 54 05.0	27.0	48.5
49		ζ Aquilæ	3	+13 38	15.5	37.5	18 58 59.9	22.3	44.3

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
21	58	41.02	— .083			+0	50.00	—0.88	21	57	50.94	1
22	02	52.88	— .079				.00		22	02	02.80	2
22	06	07.80	— .105				.00		22	05	17.70	3
22	09	16.56	— .085				.00		22	08	26.48	4
22	13	17.58	— .056				.00		22	12	27.52	5
22	17	59.28	— .062				49.99		22	17	09.23	6
22	21	28.66	— .064				.99		22	20	38.61	*7
22	25	44.62	— .035				.99		22	24	54.60	8
22	30	21.24	— .070				.99		22	29	31.18	9
22	35	25.60	— .074				.98		22	34	35.55	10
22	39	42.56	— .030				.98		22	38	52.55	11
22	45	09.02	— .073				.98		22	44	18.97	12
22	49	41.74	— .109	+0	50.27		.97		22	48	51.66	13
22	53	18.56	— .064				.97		22	52	28.53	14
22	57	40.36	— .043	+0	49.63	+0	49.97	—0.88	22	56	50.35	15
23	36	45.00	— .180			+0	47.70	—1.11	23	35	57.12	16
23	40	33.74	— .135				.70		23	39	45.91	17
23	44	37.26	— .120				.70		23	43	49.44	18
23	51	19.74	— .150				.69		23	50	31.90	19
23	55	10.00	— .105				.69		23	54	22.21	20
0	00	58.14	— .042	+0	47.72		.68		0	00	10.42	21
0	05	50.66	— .086		47.61		.68		0	05	02.89	22
0	10	50.98	— .114				.68		0	10	03.19	23
0	13	12.74	— .106				.68		0	12	24.95	24
0	19	12.88	— .272				.68		0	18	24.93	25
0	22	42.74	— .151				.68		0	21	54.91	26
0	27	28.24	— .091				.67		0	26	40.48	27
0	31	37.06	— .036				.67		0	30	49.35	28
0	36	23.96	— .157	+0	47.71		.67		0	35	36.13	29
0	41	13.50	— .107			+0	47.66	—1.11	0	40	25.73	30
23	55	11.02				+0	48.87	+1.20	23	54	22.15	31
0	00	59.34		+0	48.93		.88		0	00	10.46	32
0	05	51.94			48.94		.88		0	05	03.06	33
0	13	13.84					.89		0	12	24.95	34
0	22	44.04					.90		0	21	55.14	35
0	27	29.42					.90		0	26	40.52	36
0	31	38.74					.90		0	30	49.84	37
0	36	25.02			48.91		.90		0	35	36.12	38
0	41	14.72					.90		0	40	25.82	39
0	45	41.52					.91		0	44	52.61	40
0	49	31.92					.91		0	48	43.01	41
0	55	30.20					.92		0	54	41.28	42
1	00	47.50					.92		0	59	58.58	43
1	16	52.84		+0	48.70	+0	48.93	+1.20	1	16	03.91	44
18	36	37.00				+0	53.15	—0.34	18	35	43.85	45
18	41	07.50					.15		18	40	14.35	46
18	46	18.02					.14		18	45	24.88	47
18	54	05.02					.14		18	53	11.88	48
18	58	59.90		+0	53.14	+0	53.14	—0.34	18	58	06.76	49

No. 7. A double star, each estimated of the 5th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	July 25	e^2 Ophiuchi	5.6	—23°50′	49.0	12.5	17 22 36.2	59.9	23.3
2		α Ophiuchi	2	+12 41	42.5	4.8	17 28 26.6	48.9	10.6
3		ο Serpentis	4.5	—12 47	37.5	59.5	17 33 21.8	44.1	6.0
4		3 Sagittarii	5	—27 46	37.6	1.6	17 38 26.4	51.0	15.0
5		μ Herculis	4	+27 49	19.4	43.2	17 41 07.5	31.7	55.5
6		z Ophiuchi	6.7	—24 51	12.6	36.0	17 46 00.2	24.4	47.8
*7		2052 A. S. C.	5	—30 14	56.8	21.0	17 49 46.2	11.5	36.2
8		υ Ophiuchi	4	+ 2 57	51.0	12.8	17 53 34.1	56.0	19.3
9		2085 A. S. C.	5	—28 28	5.0	29.5	17 58 54.2	19.0	43.5
10		μ^1 Sagittarii	3.4	—21 06	22.0	45.0	18 05 08.5	32.0	55.0
11		δ Sagittarii	3.4	—29 53	52.5	17.3	18 11 42.5	7.7	32.5
*12	27	e^2 Ophiuchi	5.6	—23 50	50 5	13.8	17 22 37.4	1.0	24.4
13		α Ophiuchi	2	+12 41	43.8	5.4	17 28 27.9	50.2	11.7
14		ο Serpentis	4.5	—12 47	39.0	0.5	17 33 23.0	45.5	7.0
15		3 Sagittarii	5	—27 46	39.0	3.0	17 38 27.6	52.3	16.3
16		μ Herculis	4	+27 49	20.4	44.5	17 41 09.2	33.8	58.0
17		z Ophiuchi	6.7	—24 51	14.0	37.3	17 46 01.4	25.5	49.0
18		2052 A. S. C.	5	—30 14	57.5	22.2	17 49 47.1	12.0	37.0
19		o Ophiuchi	4	+ 2 57	52.1	13.7	17 53 35.5	57.2	18.6
20		2085 A. S. C.	5	—28 28	6.5	30.8	17 58 55.4	20.1	44.5
21		μ^1 Sagittari	3.4	—21 06	23.5	46.5	18 05 09.7	33.0	56.0
22	Aug. 2	μ^1 Sagittarii	3.4	—21 06	24.6	47.6	18 05 11.0	34.3	57.3
23	3	2085 A. S. C.	5	—28 28	7.6	32.1	17 58 56.9	21.6	46.0
24		μ^1 Sagittarii	3.4	—21 06	25.0	48.0	18 05 11.2	34.5	57.5
25		δ Sagittari	3.4	—29 53		20.0	18 11 45.0	10.0	
*26		ι Herculis	6	+28 48	56.1	20.5	18 15 45.3	10.3	34.8
27		λ Sagittarii	4	—25 30		41.4	18 19 05.3		
28		B Aquilæ	5	— 8 12	15.6	37.2	19 04 59.2	21.2	42.8
*29		d Sagittarii	5	—19 14	30.2	53.0	19 09 16.0	39.0	1.8
30		f Aquilæ	6	— 5 42	16.2	37.8	19 12 59.6	21.5	43.2
31		δ Aquilæ	3.4	+ 2 48	41.8	3.2	19 18 25.0	46.8	8.3
32		Aquilæ	6	+ 2 4–	34.6	56.0	19 21 17.9	39.8	1.0
*33		β^1 Cygni	3	+27 38	26.5	50.4	19 25 15.0	39.6	3.4
34	5	ε Bootis	3	+27 45	8.8	33.0	14 38 57.8	22.5	46.8
35		β Libræ	2.3	— 8 47	38.9	0.5	15 09 22.5	44 5	6.0
36		Moon I	(8.1)	—23 19	50.5	14.3	15 11 38.6	3.0	26.8
37		α Cor. Bor.	2	+27 15	4.2	28.4	15 28 52.8	17.3	41.5
38		α Serpentis	2.3	+ 6 56	38.0	59.8	15 37 21.6	43.5	5.2
39	6	β^1 Scorpii	2	—19 22	21.6	44.5	15 57 07.5	30.5	53.3
40		Moon I	(9.1)	—26 10	25.2	50.0	16 04 14.8	39 7	4.5
41		δ Ophiuchi	3	— 3 16	13.7	35.0	16 06 56.8	18.6	39.8
42		σ Scorpii	4	—25 12	39.5	3.5	16 12 27.5	51.5	15 6
43		γ Herculis	3.4	+19 32	4.6	27.3	16 15 50.4	13.5	36.3
44		α Scorpii	1	—26 04	47.6	11.5	16 20 35.6	59.8	23.8
45		τ Scorpii	3.4	—27 53	6.5	30.7	16 26 55.2	20.0	44.3
46	8	α Herculis	3.4	+14 35	36.0	58.0	17 08 20.5	43.0	5.0
*47		θ Ophiuchi	3.4	—24 50	23.6	47.1	17 13 11.0	35.0	58.5

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
17	22	36.18				+0	52.81	+0.61	17	21	43.37	*1
17	28	26.58		+0	52.83		.82		17	27	33.76	2
17	33	21.78					.82		17	32	28.96	3
17	38	26.32					.82		17	37	33.50	4
17	41	07.46					.82		17	40	14.64	5
17	46	00.20					.82		17	45	07.38	6
17	49	46.24					.82		17	48	53.42	*7
17	53	34.14					.82		17	52	41.32	8
17	58	54.24					.82		17	58	01.42	9
18	05	08.50		+0	52.81		.82		18	04	15.68	10
18	11	42.50				+0	52.83	+0 61	18	10	49.67	11
17	22	37.42				+0	54.02	+0.61	17	21	43.40	*12
17	28	27.78		+0	54.01		.03		17	27	33.75	13
17	33	23.00					.03		17	32	28.97	14
17	38	27.64					.03		17	37	33.61	15
17	41	09.18					.03		17	40	15.15	16
17	46	01.44					.03		17	45	07.41	17
17	49	47.16					.03		17	48	53.13	18
17	53	35.42					.03		17	52	41.39	19
17	58	55.46					.03		17	58	01.43	20
18	05	09.74		+0	54.05	+0	54.03	+0.61	18	04	15.71	21
18	05	10.96		+0	55.29	+0	55.29	+0.33	18	04	15.67	22
17	58	56.84				+0	55.61	+0.30	17	58	01.23	23
18	05	11.24		+0	55.62		.61		18	04	15.63	24
18	11	45.00					.61		18	10	49.39	25
18	15	45.40					.61		18	14	49.79	*26
18	19	05.37					.62		18	18	09.75	27
19	04	59.20					.62		19	04	03.58	28
19	09	16.00					.62		19	08	20.38	*29
19	12	59.66					.62		19	12	04.04	30
19	18	25.02		+0	55.62		.62		19	17	29.40	31
19	21	17.86					.62		19	20	22.24	32
19	25	14.98				+0	55.62	+0.30	19	24	19.36	*33
14	38	57.78		+0	55.51	+0	55.52	+0.30	14	38	02.26	34
15	09	22.48			55.54		.52		15	08	26.96	35
15	11	38.64					.52		15	10	43.12	36
15	28	52.84			55.51		.52		15	27	57.32	37
15	37	21.62		+0	55.51	+0	55.52	+0.30	15	36	26.10	38
15	57	07.48		+0	55.82	+0	55.81	+0.20	15	56	11.67	39
16	04	14.84					.81		16	03	19.03	40
16	06	56.78			55.82		.81		16	06	00 97	41
16	12	27.52					.81		16	11	31.71	42
16	15	50.42					.81		16	14	54.61	43
16	20	35.66		+0	55.78		.81		16	19	39.85	44
16	26	55.34				+0	55.81	+0.20	16	25	59.53	45
17	08	20.50	+ .128	+0	56.37	+0	56.38	±0.00	17	07	24.25	46
17	13	11.04	+ .296				56.38		17	12	14.96	*47

Nos. 1 12, 26, 29, 33, 47. Two stars in the field of the instrument.
7. A double star.
26. Followed by a star differing in right ascension, 0s.7.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug. 8	λ Herculis	4.5	+26°14′	27.5	51.2	17 25 15.5	39.9	3.5
2	cont'd.	α Ophiuchi	2	+12 41	45.8	7.5	17 28 29.8	52.2	14.0
3		κ Scorpii	3	—38 56	30.5	58.2	17 32 26.0		
4		3 Sagittarii	5	—27 46	40.5	5.0	17 38 29.5	54.0	18.5
5		87 Herculis	5	+25 41	31.0	55.0	17 43 19.2	43.3	7.3
6		2051 A. S. C.	6	— 4 03	37.0	58.5	17 49 20.3	42.1	3.5
7	9	3 Sagittarii	5	—27 46	41.2	5.1	17 38 30.0	54.9	18.8
8		87 Herculis	5	+25 41	31.3	55.0	17 43 19.3	43.5	7.2
9		2051 A. S. C.	6	— 4 03	37.2	58.7	17 49 20.5	42 3	3.9
10		γ^2 Sagittarii	4	—30 25	42.3	7.5	17 56 32.5	57.6	22.9
11		2085 A. S. C.	5	—28 28	8.5	33.0	17 58 57.5	22.0	46.5
12		μ^1 Sagittarii	3.4	—21 06	26.0	49.0	18 05 12.0	35.0	58.0
13		2103 A S. C.	5.6	—27 06	14.5	38.2	18 09 03 0	27.7	51.2
*14		ε Sagittarii	3	—34 27	41.6	7.7	18 14 34.0	0.3	26.6
15		λ Sagittarii	4	—25 30	18.6	42.3	18 19 06.4	30.6	54.2
16		2132 A. S. C.	6	—18 30	18.5	41.2	18 23 04.0	27.0	49.8
17		2146 A. S. C.	6	+23 30	19.0	42.5	18 27 06.2	29.9	53.4
18		26 Sagittarii	6.7	—23 58	19.3	42.8	18 33 06.5	30.3	54.0
19		φ Sagittarii	4.5	—27 09	51.6	16.0	18 36 40.2	4.5	29.0
20		r Sagittarii	6	—20 30	21.9	47.5	18 41 10.7	34.0	56.5
21		σ Sagittarii	3	—26 29	33.1	57.1	18 46 21.2	45.5	9.4
22		Moon I	(12.2)	—26 49	12.8	37.5	18 50 02.6	27.8	52.6
23		i Aquilæ	5.6	— 5 57	24.9	46.5	18 54 08.3	30.2	51.8
24		τ Sagittarii	4	—27 54	8.6	33.2	18 57 57.7	22.2	46.8
25		19 Aquilæ	6	+ 5 50	26.2	48.0	19 02 09.7	31.5	53.3
26		ψ Sagittarii	6	—25 31	56.5	20.2	19 06 44.2	8.3	32.2
27		ω^1 Aquilæ	5.6	+11 19	34.0	55.8	19 11 18.0	40.2	2.0
28		χ^1 Sagittarii	6	—24 49	45.1	8.9	19 16 32.9	56.9	20.7
29		δ Aquilæ	3.4	+ 2 48	42.5	4.0	19 18 25.8	47.6	9.2
30	10	τ Sagittarii	4	—27 54	10.5	34.3	18 57 59.0	23.7	47.5
31		19 Aquilæ	6	+ 5 50	27.5	49.0	19 02 10.7	32.5	54.0
32		ψ Sagittarii	6	—25 31	57.7	21.6	19 06 45.6	9.6	33.6
33		ω^1 Aquilæ	5.6	+11 19	35.5	57.2	19 11 19.5	42.0	3.6
34		χ^1 Sagittarii	6	—24 49			19 16 34.1		
*35		β^1 Cygni	3	+27 38	28.5	52.8	19 25 17.2	41.6	6.0
36	11	γ Aquilæ	3	+10 14	56.2	18.0	19 39 40.1	2.2	24.0
37		α Aquilæ	1.2	+ 8 27	16.0	37.8	19 43 59.6	21.4	43.3
38		β Aquilæ	3.4	+ 6 01	45.1	6.5	19 48 28.3	50.2	11.6
39		c Sagittarii	5	—28 09	2.0	26.1	19 53 50.8	15.5	39.5
40		τ Aquilæ	5.6	+ 6 50	37.0	58.5	19 57 20.4	42.3	3.8
41		i Vulpeculæ	5.6	+23 10	15.0	38.2	20 01 01.9	25.6	43.9
42		18 Vulpeculæ	6	+26 26	5.5	29.6	20 04 53.8	18.0	42.0
*43		α^2 Capricorni	3	—13 02	27.5	49.7	20 10 12.0	34.3	56.5
*44		β^2 Capricorni	3.4	—15 17	18.0	40.2	20 13 02.7	25.2	47.3
45		π Capricorni	5	—18 44		47.7	20 19 10.9	34.2	
46		f Capricorni	6	—22 55	22.5	46.0	20 21 09.5	33.0	56.5
47		ε Delphini	4	+10 46	51.0	13.0	20 26 35.1	57.2	10.2
48		I Aquilæ	5	— 1 39	22.5	44.1	20 31 05.7	27.4	48.9
49		Moon I	(14.3)	—20 31	39.1	2.5	20 37 26.3	50.2	13.6
50		λ Delphini	6	+ 5 26	10.5	32.0	20 40 53.9	15.8	37.3

July 10.—Observations interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*m. s.*	*m. s.*	*s.*	*h. m. s.*	
17 25 15.52	+ .073		+0 56.38	±0.00	17 24 19.21	1
17 28 29.86	+ .166	+0 56.39	.38		17 27 33.65	2
17 32 26.07	+ .377		.38		17 31 30.07	3
17 38 29.50	+ .311		.38		17 37 33.43	4
17 43 19.16	+ .076		.38		17 42 22.86	5
17 49 20.28	+ .205		+0 56.38	±0.00	17 48 24.10	6
17 38 30.00	— .104		+0 56.30	+0.61	17 37 33.60	7
17 43 19.26	— .025		.30		17 42 22.94	6
17 49 20.52	— .068		.30		17 48 24.15	9
17 56 32.56	— .108		.31		17 55 36.14	10
17 58 57.50	— .105		.31		17 58 01.09	11
18 05 12.00	— .093	+0 56.28	.31		18 04 15.60	12
18 09 02.92	— .103		.31		18 08 06.51	13
18 14 34.04	— .116		.31		18 13 37.61	*14
18 19 06.42	— .100		.32		18 18 10.00	15
18 23 04.10	— .105		.32		18 22 07.68	16
18 27 06.20	— .029		.32		18 26 09.85	17
18 33 06.58	— .097		.32		18 32 10.16	18
18 36 40.26	— .103		.32		18 35 43.84	19
18 41 10.72	— .092		.32		18 40 14.31	20
18 46 21.26	— .101		.32		18 45 24.84	21
18 50 02.66	— .102		.32		18 49 06.24	22
18 54 08.34	— .071		.32		18 53 11.95	23
18 57 57.70	— .104		.32		18 57 01.28	24
19 02 09.74	— .054		.32		19 01 13.37	25
19 06 44.24	— .099		.33		19 05 47.81	26
19 11 18 00	— .047		.33		19 10 21.62	27
19 16 32.90	— .098		.33		19 15 36.47	28
19 18 25.82	— .059	+0 56.36	+0 56.33	+0.61	19 17 29.43	29
18 57 59.00	— .104		+0 57.61	+1.29	18 57 01.29	30
19 02 10.74	— .054		.61		19 01 13.08	31
19 06 45.62	— .099		.61		19 05 47.91	32
19 11 19.56	— .047		.62		19 10 21.89	33
19 16 34.10	— .059		.62		19 15 36.42	34
19 25 17.22	— .022		+0 57.63	+1.29	19 24 19.57	*35
19 39 40.10	— .127	+0 57.34	+0 57.40	—0.12	19 38 42.57	36
19 43 59.62	— .133	57.37	.40		19 43 02.09	37
19 48 28.34	— .142	57.38	.40		19 47 30.80	38
19 53 50.78	— .271		.40		19 52 53.11	39
19 57 20.40	— .139		.40		19 56 22.86	40
20 01 01.92	— .076		.40		20 00 04.44	41
20 04 53.78	— .062		.40		20 03 56.32	42
20 10 12.00	— .210	+0 57.44	.40		20 09 14.39	*43
20 13 02.68	— .218		.40		20 12 05.06	*44
20 19 10.93	— .232		.40		20 18 13.30	45
20 21 09.50	— .249		.40		20 20 11.85	46
20 26 35.10	— .125		.40		20 25 37.58	47
20 31 05.72	— .169		.40		20 30 08.15	48
20 37 26.34	— .239		.40		20 36 28.70	49
20 40 53.90	— .144		+0 57.40	—0.12	20 39 56.36	50

Nos. 14, 35, 43, 44. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug. 11 cont'd.	μ Aquarii	4.5	− 9°35′	19.0	40.8	20 45 02.8	24.8	46.5
2		q Vulpeculæ	5	+27 27	57.0	21.1	20 48 45.6	10.0	34.0
3		ε Equulei	5.6	+ 3 41	22 5	44 0	20 52 05.9	27.8	49.2
4		η Capricorni	5	−20 29	33.2	56.0	20 56 19.2	42.5	5.5
5		χ^1 Capricorni	5.6	−21 50	38.5	1.6	21 00 25.0	48.8	11.5
*6		γ Equulei	5	+ 9 30	51.0	12.5	21 03 34.8	57.0	18.5
7		ζ Cygni	3	+29 35	19.0	43.7	21 07 08.7	33.7	58.3
8	14	η Aquarii	4	− 0 56	27.0	48.4	22 28 10.2	32.0	53.4
9		ζ Pegasi	3	+10 00	47.1	8.9	22 34 31.0	53.1	14.9
10		ψ^1 Piscis Aus.	6	−26 04	59.5	23.8	22 37 48.0	12.1	36.3
11		λ Aquarii	4	− 8 25	34.5	56.0	22 45 18.0	40.0	1.5
12		α Piscis Aus.	1	−30 28	0.8	25.8	22 49 50.9	16.0	40.8
13		x^2 Piscium	6	− 0 40	44.2	5.9	22 53 27.7	49.5	11.2
14		α Pegasi	2	+14 21	5.0	27.0	22 57 49.5	12.1	34.0
15		c^2 Aquarii	4.5	−22 02	10.5	33.6	23 01 57.0	20.5	43.7
16		p Pegasi	5.6	+ 7 51	58.0	19.8	23 04 41.5	3.5	25.3
17		Moon II	(17.4)	− 4 02	57.8	19.8	23 07 42.0	4.2	26.2
*18		τ Pegasi	5.6	+22 52	58.0	21.5	23 13 45.0	8.5	32.0
19		υ Pegasi	5	+22 32	39.0	2.0	23 18 25.8	49.5	12.5
20		q Pegasi	5	+11 53	21.2	43.0	23 22 05.5	28.0	49.8
21		16 Piscium	6	+ 1 13	32.0	53.5	23 29 15.0	36.5	58.0
22		ι Piscium	4.5	+ 4 46	1.7	23.2	23 32 45.1	7.0	28.5
23		λ Piscium	5	+ 0 54	11.5	33.0	23 34 54.8	16.5	38.0
24		21 Piscium	6	+ 0 11	34.3	55.8	23 42 17.5	39.2	0.7
25	16	η Aquarii	4	− 0 56	27.0	48.4	22 28 10.1	31.9	53.3
26		ζ Pegasi	3	+10 00	47.0	8.9	22 34 31.1	53.2	15.1
27		ψ Piscis Aus.	6	−26 04	59.7	23.6	22 37 47.6	11.5	35.5
28		70 Aquarii	6	−11 24	22.8	44.7	22 41 07.0	29.2	51.1
29		λ Aquarii	4	− 8 25	34.3	56.0	22 45 18.0	40.0	1.8
30		α Piscis Aus.	1	−30 28	0.5	25.3	22 49 50.4	15.5	40.5
31		x^2 Piscium	6	− 0 40	44.3	5.6	22 53 27.5	49.4	10.8
32		α Pegasi	2	+14 21	5.0	27.0	22 57 49.5	12.0	34.0
33		c^2 Aquarii	4.5	−22 02	10.1	33.2	23 01 56.9	20.5	43.5
34		p Pegasi	5.6	+ 7 51	58.0	19.5	23 04 41.4	3·4	25.0
35		γ Piscium	4.5	+ 2 25	11.0	32.4	23 09 54.2	16.0	37.4
36		υ Pegasi	5	+22 32	39.1	2.5	23 18 26.0	49.5	12.5
37		q Pegasi	5	+11 53	21.7	43.8	23 22 05.9	28.0	50.0
38		b^4 Aquarii	5	−21 48	9.5	32.7	23 25 56.0	19.5	42.8
39		16 Piscium	6	+ 1 13	32.2	53.6	23 29 15.5	37.4	58.8
40		ι Piscium	4.5	+ 4 46	2.0	23.5	23 32 45.2	7.0	28.6
41		λ Piscium	5	+ 0 54	11.6	33.0	23 34 54.9	16.8	38.3
42		γ Pegasi	2.3	+14 18	17.8	39.5	0 06 02.0	24.5	46.7
*43		d Piscium	5.6	+ 7 18	40.2	2.0	0 13 23.9	45.8	7.6
44		β Ceti	2.3	−18 52			0 36 35.0	58.1	
45	18	β Arietis	3	+20 02	6.2	28.7	1 46 51.7	14.7	37.2
46		λ Arietis	5 6	+22 49	17.2	41.0	1 50 04.2	27.5	51.3
*47		α Piscium	5.6	+ 2 00	6.0	27.4	1 54 49.2	11.0	32.3
48		α Arietis	3	+22 42	26.0	49.2	1 59 12.8	36.4	59 6
49		15 Arietis	5	+18 45	3.0	26.0	2 02 49.0	12.0	35.0
50		ξ^1 Ceti	5	+ 8 06	50.8	12.5	2 05 34.3	56.2	18.0

August 16.—Observations interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
20	45	02.78	— .197			+0	57.40	—0.12	20	44	05.18	1
20	48	45.54	— .058				.40		20	47	48.08	2
20	52	05.88	— .150				.40		20	51	08.33	3
20	56	19.28	— .239				.40		20	55	21.64	4
21	00	24.98	— .244				.40		20	59	27.34	5
21	03	34.76	— .129				.40		21	02	37.23	*6
21	07	08.68	— .048	+0	57.46	+0	57.40	—0.12	21	06	11.23	7
22	28	10.20	— .614			+0	57.82	+0.21	22	27	11.77	8
22	34	31.00	— .471	+0	57.91		.82		22	33	32.71	9
22	37	47.94	— .968				.82		22	36	49.15	10
22	45	18.00	— .714				.82		22	44	19.47	11
22	49	50.86	—1.042		57.82		.82		22	48	52.00	12
22	53	27.70	— .616				.82		22	52	29.26	13
22	57	49.52	— .413		57.83		.82		22	56	51.29	14
23	01	57.06	— .904				.82		23	00	58.34	15
23	04	41.62	— .500				.82		23	03	43.30	16
23	07	42.00	— .654				.82		23	06	43.53	17
23	13	45.00	— .288				.82		23	14	46.89	*18
23	18	25.76	— .292				.82		23	17	27.65	19
23	22	05.50	— .446				.82		23	21	07.24	20
23	29	15.00	— .574				.82		23	28	16.61	21
23	32	45.10	— .540	+0	57.73		.82		23	31	46.74	22
23	34	54.76	— .590				.82		23	33	56.35	23
23	42	17.50	— .600			+0	57.82	+0.21	23	41	19.08	24
22	28	10.14	+ .141			+0	58.44	+0.45	22	27	11.84	25
22	34	31.06	+ .108	+0	58.53		.44		22	33	32.73	26
22	37	47.58	+ .221				.44		22	36	49.36	27
22	41	06.96	+ .173				.44		22	40	08.69	28
22	45	18.02	+ .163				.44		22	44	19.74	29
22	49	50.44	+ .239		58.63		.44		22	48	52.24	30
22	53	27.52	+ .139				.44		22	52	29.22	31
22	57	49.50	+ .094		58.28		.45		22	56	51.14	32
23	01	56.84	+ .207				.45		23	00	58.60	33
23	04	41.46	+ .114				.45		23	03	43.12	34
23	09	54.20	+ .128				.45		23	08	55.88	35
23	18	25.92	+ .067				.45		23	17	27.54	36
23	22	05.88	+ .102				.45		23	21	07.53	37
23	25	56.10	+ .207				.45		23	24	57.86	38
23	29	15.50	+ .134				.45		23	28	17.18	39
23	32	45.26	+ .124		58.52		.45		23	31	46.93	40
23	34	54.92	+ .135				.45		23	33	56.60	41
0	06	02.00	+ .105		58.43		.46		0	05	03.64	42
0	13	23.90	+ .116				.46		0	12	25.56	*43
0	36	35.04	+ .197	+0	58.33	+0	58.47	+0.45	0	35	36.77	44
1	46	51.70				+0	59.66	+0.50	1	45	52.04	45
1	50	04.24					.66		1	49	04.58	46
1	54	49.18					.66		1	53	49.52	*47
1	59	12.80		+0	59.67		.66		1	58	13.14	48
2	02	49.00					.66		2	01	49.34	49
2	05	34.36				+0	59.66	+0.50	2	04	34.70	50

Nos. 6, 18. Two stars in the field of the instrument.
43. Uncertain.
47. A double star; one being of the 5.6, and the other of the 6.7 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug. 18	θ^1 Arietis	6	+19°10′	31.4	54.0	2 10 17.0	40.0	2.5
2	cont'd.	69 Ceti	6	— 0 20	4.5	26.0	2 14 47.7	9.4	31.0
3		ρ Ceti	5.6	—13 00	31.8	53.7	2 19 16.0	38 4	0.2
4		ψ Arietis	6	+17 00	20.0	42.5	2 23 05.0	27.5	50.0
5		ν Ceti	5	+ 4 54	48.5	10.0	2 28 31.8	53.5	15.0
6		Moon II	(21.5)	+20 18	41.7	5.2	2 33 29.1	53.0	16.5
7		γ Ceti	3	+ 2 34	20.3	41.7	2 36 03.5	25.4	46.9
8		b Arietis	4	+28 35	37.3	1.9	2 39 26.5	51.2	15.6
9		τ^2 Eridani	4.5	—21 40	3.0	26.0	2 44 49.5	13.0	36.0
10		ρ^2 Arietis	6	+17 41	7.0	29.5	2 47 52.3	15.1	37.7
11		ε Arietis	5	+20 42	21.0	43.8	2 51 07.0	30.3	53.0
12		α Ceti	2.3	+ 3 28	14.5	36.0	2 54 57.8	19.7	41.3
13		53 Arietis	6	+17 16	43.0	5.5	2 59 28.3	51.0	13.5
14		δ Arietis	4	+19 07	46.5	9.0	3 03 32.0	55.0	17.5
15	21	σ Sagittarii	3	—26 29	37.0	1.0	18 46 25.3	49 6	13.5
16		i Aquilæ	5.6	— 5 57	29 0	50.5	18 54 12.2	34.0	55.5
17		τ Sagittarii	4	—27 54	13.0	37.0	18 58 01.8	26.6	50.5
18		19 Aquilæ	6	+ 5 50	30.2	51.8	19 02 13.6	35.4	57.0
19		ψ Sagittarii	6	—25 31	0.5	24.3	19 06 48.4	12.5	36.4
20		ω^1 Aquilæ	5.6	+11 19	38.2	0.0	19 11 22.2	44.3	6.0
*21		χ^1 Sagittarii	6	—24 49	49.2	13.0	19 16 36.9	1.0	24.7
22		δ Aquilæ	3.4	+ 2 48	46.6	8.0	19 18 29.9	51.7	13.1
23		c Aquilæ	6	+ 1 38	16.5	38.0	19 21 59.5	21.0	42.5
*24		β^1 Cygni	3	+27 38	31.0	55.2	19 25 19.6	44.1	8.4
*25		h^2 Sagittarii	5.6	—25 14	15.0	38.6	19 28 02.8	26.9	50.5
26		φ Cygni	4	+29 47	17.3	42.0	19 34 07.1	32.2	57.0
27		γ Aquilæ	3	+10 14	59.2	21.0	19 39 43.1	5.2	27.0
28		α Aquilæ	1.2	+ 8 27	19.0	40.5	19 44 02.5	24.6	46.0
29		β Aquilæ	3.4	+ 6 01	48.0	9.4	19 48 31.1	52.9	14.4
30		c Sagittarii	4.5	—28 09	5.0	29.1	19 53 54.0	18.8	42.8
31		65 Sagittarii	6.7	—13 07	52.5	14.6	19 57 36.8	59.0	21.0
32		i Vulpeculæ	5.6	+23 09	17.6	41.0	20 01 04.6	28.2	51.5
33		18 Vulpeculæ	6	+26 26	8.5	32.3	20 04 56.5	20.8	44.8
34		α^2 Capricorni	3	—13 02	30.3	52.5	20 10 15.0	37.5	59.8
35		β^2 Capricorni	3.4	—15 17	21.0	43.0	20 13 05.5	28.0	50.0
36	22	σ Sagittarii	3	—26 29	35.9	59.6	18 46 23.8	48.1	12.0
*37		64 Serpentis	6	+ 2 20	33.0	54.6	18 50 16.3	38.0	59.5
38		i Aquilæ	5.6	— 5 57	27.3	49.0	18 54 10.8	32.6	54.3
39		τ Sagittarii	4	—27 54	11.0	35.5	18 58 00.2	25.0	49.5
40		19 Aquilæ	6	+ 5 50	28.6	50.1	19 02 12.0	34.0	55.5
41		ψ Sagittarii	6	—25 31	59.1	23.0	19 06 47.0	11.0	34.8
42		ω^1 Aquilæ	5.6	+11 19	36.5	58.6	19 11 20.8	43.0	4.8
43		δ Aquilæ	3.4	+ 2 48	45.2	6.6	19 18 28.3	50.0	11.4
44		c Aquilæ	6	+ 1 38	15.0	36.5	19 21 58.0	19.5	41.0
*45		β^1 Cygni	3	+27 38	29.2	53.7	19 25 18.2	42.8	7.2
*46		h^2 Sagittarii	4.5	—25 14	13.4	37.2	19 28 01.2	25.2	49.0
47		φ Cygni	4	+29 47	15.8	40.6	19 34 05.5	30.5	55.4
48		γ Aquilæ	3	+10 14	57.6	19.5	19 39 41.6	3.6	25.5
49		α Aquilæ	1.2	+ 8 27	17.5	39.0	19 44 01.1	23.2	44.7
50		β Aquilæ	3.4	+ 6 01	46.3	7.8	19 48 29.8	51.8	13.3

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
2	10	16.98				+0	59.66	+0.50	2	09	17.32	1
2	14	47.72					.66		2	13	48.06	2
2	19	16.02					.66		2	18	16.36	3
2	23	05.00					.66		2	22	05.34	4
2	28	31.76					.66		2	27	32.10	5
2	33	29.10					.66		2	32	29.44	6
2	36	03.56		+0	59.63		.67		2	35	03.89	7
2	39	26.50					.67		2	38	26.83	8
2	44	49.50					.67		2	43	49.83	9
2	47	52.32					.67		2	46	52.65	10
2	51	07.02					.67		2	50	07.35	11
2	54	57.86		+0	59.69		.67		2	53	58.19	12
2	59	28.26					.67		2	58	28.59	13
3	03	32.00				+0	59.67	+0.50	3	02	32.33	14
18	46	25.28				+1	00.51	—0.58	18	45	24.77	15
18	54	12.24					.51		18	53	11.73	16
18	58	01.78					.50		18	57	01.28	17
19	02	13.60					.50		19	01	13.10	18
19	06	48.42					.50		19	05	47.92	19
19	11	22.14					.50		19	10	21.64	20
19	16	36.96					.50		19	15	36.46	*21
19	18	29.86		+1	00.52		.50		19	17	29.36	22
19	21	59.50					.49		19	20	59.01	23
19	25	19.66					.49		19	24	19.17	*24
19	28	02.76					.49		19	27	02.27	*25
19	34	07.12					.49		19	33	06.63	26
19	39	43.10			00.51		.49		19	38	42.61	27
19	44	02.52			00.40		.49		19	43	02.03	28
19	48	31.16			00.34		.49		19	47	30.67	29
19	53	53.94					.49		19	52	53.45	30
19	57	36.76					.49		19	56	36 27	31
20	01	04.58					.49		20	00	04.09	32
20	04	56.58					.49		20	03	56.09	33
20	10	15.02		+1	00.66		.48		20	09	14.54	34
20	13	05.50				+1	00.48	—0.58	20	12	05.02	35
18	46	23.88				+0	59.05	—1.47	18	45	24.83	36
18	50	16.28					.04		18	49	17.24	*37
18	54	10.80					.04		18	53	11.76	38
18	58	00.24					.04		18	57	01.20	39
19	02	12.04					.03		19	01	13.01	40
19	06	46.98					.03		19	05	47.95	41
19	11	20.74					.02		19	10	21.72	42
19	18	28.30		+0	58.97		.02		19	17	29.28	43
19	21	58.00					.01		19	20	58.99	44
19	25	18.22					.01		19	24	19.21	*45
19	28	01.20					.01		19	27	02 19	*46
19	34	05.56					.00		19	33	06.56	47
19	39	41.56			58.98		.00		19	38	42.56	48
19	44	01.10			59.03		.00		19	43	02.10	49
19	48	29.80		+0	59.02	+0	59.00	—1.47	19	47	30.80	50

Nos. 21, 24, 25, 37, 45, 46. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug. 24	φ Sagittarii	4.5	—27°09′	54.5	18.5	18 36 43.0	7.5	31.5
2		r Sagittarii	6	—20 20	27.8	50.8	18 41 13.9	37.0	0.0
3		σ Sagittarii	3	—26 29	35.8	59.8	18 46 24.0	8.3	12.4
*4		64 Serpentis	6	+ 2 20	33.1	54.6	18 50 16.4	38.2	59.7
5		i Aquilæ	5.6	— 5 57	28.0	49.3	18 54 11.0	32.7	54.0
6		τ Sagittarii	4	—27 54	11.7	35.9	18 58 00.4	25.0	49.3
7		19 Aquilæ	6	+ 5 50	29.0	50.3	19 02 12.1	34.0	55.4
8		ψ Sagittarii	6	—25 31	59.2	23.0	19 06 47.2	11.3	35.0
9		δ Aquilæ	3.4	+ 2 48	45.5	7.0	19 18 28.6	50.3	11.8
10		c Aquilæ	6	+ 1 38	15.3	36.7	19 21 58.4	20.2	41.6
*11		β^1 Cygni	3	+27 38	29.6	54.0	19 25 18.5	43.0	7.3
*12		h^2 Sagittarii	5	—25 14	13.5	37.6	19 28 01.6	25.5	49.5
13		φ Cygni	4	+29 47	16.0	40.7	19 34 05.8	31.0	55.7
14		γ Aquilæ	3	+10 14	58.5	20.0	19 39 41.8	3.6	25.0
15		α Aquilæ	1.2	+ 8 27	17.7	39.3	19 44 01.3	23.4	45.0
16		β Aquilæ	3.4	+ 6 01	46.5	8.0	19 48 30.1	52 2	13.6
17		c Sagittarii	5	—28 09	3.5	28.0	19 53 52.6	17.2	41.6
18		65 Sagittarii	6.7	—13 07	51.5	13.5	19 57 35.7	58.0	20.0
19		i Vulpeculæ	5.6	+23 09	16.6	39.8	20 01 03.4	27.0	50.3
20		18 Vulpeculæ	6	+26 26	7.0	31.0	20 04 55.2	19.5	43.4
*21		α^2 Capricorni	3	—13 02	29.2	51.5	20 10 13.7	36.0	58.1
*22		β^2 Capricorni	3.4	—15 17	18.3	41.6	20 13 04.3	27.0	40.4
*23	25	ν^1 Sagittarii	5.6	—22 56	47.0	10.2	18 45 33.6	57.0	20.2
24		k Aquilæ	5.6	— 6 02	49.2	10.6	18 49 32.5	51.5	16.0
25		ζ Sagittarii	4	—30 06	39.5	4.4	18 53 29.6	54.8	19.8
26		ο Sagittarii	4.5	—21 58	22.7	46.0	18 56 09.2	32.5	55.7
27		ζ Aquilæ	3	+13 38	21.5	43.5	18 59 05.8	28.1	50.0
28		2224 A. S. C.	6.7	—21 55	11.2	34.2	19 03 57.6	21.0	41.0
*29		d Sagittarii	5	—19 14	34.0	56.5	19 09 19.5	42.5	5.0
30		f Aquilæ	6	— 5 42	20.0	41.3	19 13 03.2	25.2	46.5
31		χ^3 Sagittarii	6.7	—24 16	4.5	28.1	19 16 52.0	16.0	39.6
32		δ Aquilæ	3.4	+ 2 48	45.4	6.8	19 18 28.4	50.1	11.5
33		b Vulpeculæ	4.5	+24 21	18.0	41.2	19 23 05.1	29.0	52.3
34		8 Vulpeculæ		+24 27			19 23 19.0		7.2
35		h^1 Sagittarii	6	—25 03	34.4	58.0	19 27 22.0	46.0	9.6
36		ε Sagittæ	6	+16 07	20.4	42.5	19 31 05.2	27.9	50.0
37		β Sagittæ	5	+17 07	9.1	31.2	19 34 54.1	17.0	39.1
38		α Aquilæ	1.2	+ 8 27	17.3	39.3	19 44 01.3	23.3	45.5
39		β Aquilæ	3.4	+ 6 01	46 5	8.0	19 48 30.0	52.1	13.6
40		11 Sagittæ	6	+16 22	47.2	9.5	19 51 32.2	54.8	17.0
41		g Vulpeculæ	5	+27 19	44.4	8.9	19 55 33.2	57.5	21.8
42	26	2132 A. S. C.	6	—18 30	22.2	44.6	18 23 07.5	30.5	53.0
43		26 Sagittarii	6	—23 58	23.0	46.5	18 33 10.0	33.5	57.0
44		28 Sagittarii	6	—22 33	59.0	22.0	18 37 45.5	9.0	32.0
45		M Herculis	5.6	+18 01	15.0	37.3	18 41 00.2	23.1	45.4
*46		ν^1 Sagittarii	5.6	—22 56	47.7	10.8	18 45 34.2	57.5	20.5
47		k Aquilæ	5.6	— 6 02	49.9	11.2	18 49 33.0	54.8	16.2
48		ζ Sagittarii	4	—30 06	40.2	4.7	18 53 29.9	55.0	19.5
*49		ο Sagittarii	4.5	—21 58	23.0	46.2	18 56 09.5	32.8	56.0
50		ζ Aquilæ	3	+13 38	22.0	44.1	18 59 06.5	28.9	51.0
51		2224 A. S. C.	6.7	—21 55	11.6	35.0	19 03 58.4	21.8	45.2

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
18	36	43.00				+0	59.29	— 0.08	18	35	43.71	1
18	41	13.90					.29		18	40	14.61	2
18	46	24.06					.29		18	45	24.77	3
18	50	16.40					.29		18	49	17.11	*4
18	54	11.00					.29		18	53	11.71	5
18	58	00 46					.29		18	57	01.17	6
19	02	12.16					.29		19	01	12.87	7
19	06	47.14					.29		19	05	47.85	8
19	18	28.64		+0	59.32		.29		19	17	29.35	9
19	21	58.44					.29		19	20	59.15	10
19	25	18.48					.29		19	24	19.19	*11
19	28	01.54					.29		19	27	02.25	*12
19	34	05.84					.29		19	33	06.55	13
19	39	41.78		+0	59.21		.29		19	38	42.49	14
19	44	01.34			59.28		.29		19	43	02.05	15
19	48	30.08			59.31		.29		19	47	30.79	16
19	53	52.58					.29		19	52	53.29	17
19	57	35.74					.29		19	56	36.45	18
20	01	03.42					.29		20	00	04.13	19
20	04	55.22					.29		20	03	55.93	20
20	10	13.70		+0	59.35		.29		20	09	14.41	*21
20	13	04.32				+0	59.29	— 0.08	20	12	05.03	*22
18	45	33.60				+0	59.20	+ 0.35	18	44	34.40	*23
18	49	32.56					.21		18	48	33.35	24
18	53	29.62					.21		18	52	30.41	25
18	56	09.22					.21		18	55	10.01	26
18	59	05.78		+0	59.17		.21		18	58	06.57	27
19	03	57.60					.21		19	02	58.39	28
19	09	19.50					.21		19	08	20.29	*29
19	13	03.24					.21		19	12	04.03	30
19	16	52.04					.21		19	15	52.83	31
19	18	28.44			59.13		.21		19	17	29.23	32
19	23	05.12					.21		19	22	05.91	33
19	23	19.15					.21		19	22	19.94	34
19	27	22.00					.21		19	26	22.79	35
19	31	05.20					.21		19	30	05.99	36
19	34	54.12					.21		19	33	54.91	37
19	44	01.34			59.28		.21		19	43	02.18	38
19	48	30.04		+0	59.27		.21		19	47	30.83	39
19	51	32.14					.21		19	50	32.93	40
19	55	33.16				+0	59.22	+ 0.35	19	54	33.94	41
18	23	07.56				+0	59.97	+ 0.79	18	22	07.59	42
18	33	10.00					.97		18	32	10.03	43
18	37	45.50					.98		18	36	45.52	44
18	41	00.20					.98		18	40	00.22	45
18	45	34.14					.98		18	44	34.16	*46
18	49	33.02					.98		18	48	33.04	47
18	53	29.86					.99		18	52	29.87	48
18	56	09.50					.99		18	55	09.51	*49
18	59	06.50		+0	59.90		.99		18	58	06.51	50
19	03	58.40				+0	59.99	+ 0.79	19	02	58.41	51

No. 4. Three stars in the field of the instrument.
11, 12, 21, 22, 23, 29, 46, 49. Two stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	Aug. 26 cont'd.	*d* Sagittarii	5	—19°14′	34.5	57.2	19 09 20.3	43.3	6.0
2		*f* Aquilæ	6	— 5 42	20.7	42.0	19 13 04.0	26.0	47.3
3		χ^3 Sagittarii	6	—24 16	5.4	28.8	19 16 52.6	16.4	40.0
4		δ Aquilæ	3.4	+ 2 48			19 18 29.2	51.0	12.3
5		*b* Vulpeculæ	4.5	+24 21	18.4	42.0	19 23 05.9	29.8	53.5
6		8 Vulpeculæ		+24 26			19 23 19.5		
7		h^1 Sagittarii	6	—25 03	35.0	58.8	19 27 22.8	46.8	10.5
8		ε Sagittæ	6	+16 07	21.0	43.3	19 31 06.1	29.0	51.3
9		β Sagittæ	5	+17 07	9.7	32.2	19 34 55.0	17.8	40.3
10		γ Aquilæ	3	+10 14	58.6	20.4	19 39 42.6	4.8	26.5
11		α Aquilæ	1.2	+ 8 27	18.2	40.0	19 44 02.0	24.0	45.8
12		β Aquilæ	3.4	+ 6 01	47.4	9.0	19 48 31.0	53.0	14.6
13		11 Sagittæ	6	+16 22	48.0	10.4	19 51 33.0	55.6	18.0
14		*g* Vulpeculæ	5	+27 19	45.5	9.7	19 55 34.0	58.3	22.5
15	28	2132 A. S. C.	6	—18 30	23.9	46.2	18 23 09.0	31.7	53.8
16		*q* Clypei Sob.	6	—11 06	30.1	52.0	18 27 14.1	36.2	58.0
17		26 Sagittarii	6	—23 58	24.5	48.1	18 33 11.7	35.4	59.0
18		28 Sagittarii	6	—22 33	0.5	23.8	18 37 47.4	11.0	34.3
19		M Herculis	5.6	+18 01	16.6	39.0	18 41 02.0	25.0	47.5
*20		ν^1 Sagittarii	5.6	—22 56	49.2	12.5	18 45 36.0	59.5	23.0
21		*k* Aquilæ	5.6	— 6 02	51.2	13.0	18 49 35.0	57.0	18.8
22		ζ Sagittarii	4	—30 06	42.1	6.5	18 53 31.8	57.0	21.3
23		ο Sagittarii	4.5	—21 58	24.6	47.6	18 56 11.3	35.0	58.0
24		ζ Aquilæ	3	+13 38	24.0	46.0	18 59 08.3	30.6	52.5
25		2224 A. S. C.	6.7	—21 55	13.5	36.6	19 04 00.0	23.5	46.6
*26		*d* Sagittarii	5.6	—19 14	36.2	59.0	19 09 22.0	45.0	7.6
27		δ Aquilæ	3.4	+ 2 48	47.6	9.0	19 18 31.0	53.0	14.3
*28	29	*d* Sagittarii	5	—19 14	36.0	58.6	19 09 21.7	44.8	7.5
29		*f* Aquilæ	6	— 5 42	21.9	43.5	19 13 05.3	27.1	48.5
30		χ^3 Sagittarii	6	—24 16	6.5	30.2	19 16 54.0	17.8	41.5
31		δ Aquilæ	3.4	+ 2 48	47.5	8.8	19 18 30.6	52.3	13.6
32		*b* Vulpeculæ	5	+24 21	19.8	43.2	19 23 07.1	31.0	54.3
33		8 Vulpeculæ	6	+24 26			19 23 20.9		
34		h^1 Sagittarii	6	—25 03	36.2	0.1	19 27 24.0	48.0	11.9
35		ε Sagittæ	6	+16 07	22.2	44.6	19 31 07.3	30.0	52.0
36		β Sagittæ	5	+17 07	11.0	33.5	19 34 56.2	19.0	41.5
37		γ Aquilæ	3	+10 14	0.0	21.8	19 39 43.8	5.9	27.6
38		α Aquilæ	1.2	+ 8 27	19.3	41.1	19 44 03.0	24.9	46.8
39		β Aquilæ	3.4	+ 6 01	48.6	10.0	19 48 32.0	54.0	15.4
40		11 Sagittæ	6	+16 22	49.1	11.5	19 51 34.2	56.9	19.3
41		*g* Vulpeculæ	5	+27 19	46.5	10.6	19 55 35.0	59.4	23.5
42	30	2051 A. S. C.	6	— 4 03	42.0	3.6	17 49 25.3	47.0	8.5
43		ζ Serpentis	5	— 3 40	23.2	44.6	17 53 06.3	28.0	49.4
44		γ^2 Sagittarii	4	—30 25	47.1	12.0	16 56 37.0	2.0	27.0
45		μ^1 Sagittarii	3.4	—21 06	30.5	53.3	18 05 16.7	40.1	2.9
46		Herculis		+28 58		50.8	18 15 15.6		
47		*t* Herculis	5	+28 48	1.5	25.7	18 15 50.5	15.4	39.6
48		*d* Serpentis	6	+ 0 06	22.8	44.1	18 20 05.9	27.7	49.0
49		2132 A. S. C.	6	—18 30	23.4	46.0	18 23 08.8	31.6	54.2
50		*q* Clypei Sob.	6	—11 06	29.8	51.6	18 27 13.8	36.0	57.8

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
19	09	20.26				+0	59.99	+0.79	19	08	20.27	*1
19	13	04.00					.99		19	12	04.01	2
19	16	52.64					.99		19	15	52.65	3
19	18	29.18		+0	59.88		.99		19	17	29.19	4
19	23	05.92					.99		19	22	05.93	5
19	23	19.50					.99		19	22	19.51	6
19	27	22.78				1	00.00		19	26	22.78	7
19	31	06.14					.00		19	30	06.14	8
19	34	55.00					.00		19	33	55.00	9
19	39	42.58		1	00.02		.00		19	38	42.58	10
19	44	02.00		0	59.95		.01		19	43	01.99	11
19	48	31.00		+1	00.24		.01		19	47	30.99	12
19	51	33.00					.01		19	50	32.99	13
19	55	34.00				+1	00.01	+0.79	19	54	33.99	14
18	23	08.92				+1	01.68	+0.89	18	22	07.24	15
18	27	14.08					.68		18	26	12.40	16
18	33	11.74					.68		18	32	10.06	17
18	37	47.40					.69		18	36	45.71	18
18	41	02.02					.69		18	40	00.33	19
18	45	36.04					.69		18	44	34.35	*20
18	49	35.00					.69		18	48	33.31	21
18	53	31.74					.69		18	52	30.05	22
18	56	11.30					.70		18	55	09.60	23
18	59	08.28		+1	01.70		.70		18	58	06.58	24
19	04	00 04					.70		19	02	58.34	25
19	09	21.98					.70		19	08	20.28	*26
19	18	30.98		+1	01.70	+1	01.70	+0.89	19	17	29.28	27
19	09	21.72				+1	01.21	—0.24	19	08	20.51	*28
19	13	05.26					.21		19	12	04.05	29
19	16	54.00					.21		19	15	52.79	30
19	18	30.56		+1	01.29		.21		19	17	29.35	31
19	23	07.08					.21		19	22	05.87	32
19	23	20.90					.21		19	22	19.69	33
19	27	24.04					.21		19	26	22.83	34
19	31	07.22					.21		19	30	06.01	35
19	34	56.24					.21		19	33	55.03	36
19	39	43.82			01.29		.21		19	38	42.61	37
19	44	03.02			00.99		.21		19	43	01.81	38
19	48	32.00		+1	01.26		.21		19	47	30.79	39
19	51	34.20					.21		19	50	32.99	40
19	55	35.00				+1	01.21	—0.24	19	54	33.79	41
17	49	25.28	— .068			+1	01.16	+0.56	17	48	24.05	42
17	53	06.30	— .068				.16		17	52	05.07	43
17	56	37.02	— .108				.16		17	55	35.75	44
18	05	16.70	— .093	+1	01.21		.16		18	04	15.45	45
18	15	15.40	— .020				.17		18	14	14.21	46
18	15	50.54	— .026				.17		18	14	49.35	47
18	20	05.90	— .063				.17		18	19	04.67	48
18	23	08.80	— .089				.17		18	22	07.54	49
18	27	13.80	— .078			+1	01.17	+0.56	18	26	12.55	50

Nos. 1, 20, 26, 28. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug 30 cont'd.	26 Sagittarii	6	—23°58′	24.1	47.5	18 33 11.2	35.0	58.5
2		4 Aquilæ	5.6	+ 1 54	6.8	28.2	18 37 50.0	11.8	33.3
3		30 Sagittarii	6.7	—22 20	32.0	55.0	18 42 18.6	42.2	5.3
4		ν^2 Sagittarii	5	—22 52	45.0	8.2	18 46 32.0	55.7	19.0
5		Sagittarii		—22 —		12.0	18 46 36.0		23.2
*6		θ^1 Serpentis	4.5	+ 4 00	37.2	58.8	18 49 20.5	42.2	3.8
*7		θ^2 Serpentis		+ 4 00		0.5	18 49 22.0	44.0	5.3
8		2195 A. S. C.	6.7	—22 55	17.5	40.8	18 53 04.3	27.8	51.2
9		Aquilæ		— 4 —			18 57 34.5		
10		*h* Aquilæ	6	— 4 16	52.3	13.9	18 57 35.5	7.1	28.7
11		ζ Aquilæ	3	+13 38	23.4	45.4	18 59 07.8	30.2	52.2
12		π Sagittarii	4.5	—21 16	33.9	56.5	19 01 20.2	43.8	6.4
13		B Aquilæ	5.6	— 8 12	21.2	42.8	19 05 04.8	26.8	48.5
*14		1 Sagittæ	6	+20 57	41.8	4.5	19 09 28.0	51.5	14.0
15		β^2 Sagittarii	4	—45 05	44.2	14.5	19 12 45.4	16.3	46.3
16		2255 A. S. C.	6	—28 10	48.1	12.3	19 15 37.0	1.7	25.9
17		δ Aquilæ	3.4	+ 2 48	47.4	8.8	19 18 30.5	52.3	13.7
18		2276 A. S. C.	6.7	—21 38	43.0	6.0	19 22 29.4	52.8	15.8
19		2283 A. S. C.	7	+20 36	28.3	46.3	19 26 09.5	32.8	55.8
20		κ Aquilæ	5	— 7 22	38.5	0.0	19 29 21.9	43.8	5.3
21		45 Aquilæ	6	— 0 59	50.3	11.8	19 33 33.6	55.4	16.8
22		γ Aquilæ	3	+10 14	0.0	21.7	19 39 43.7	5.8	27.5
23		α Aquilæ	1.2	+ 8 27	19.8	41.2	19 44 03.2	25.2	46.6
24		β Aquilæ	3.4	+ 6 01	48.5	10.0	19 48 31.9	53.8	15.4
25		γ Sagittæ	4.5	+19 04	57.4	20.1	19 52 43.0	6.0	28.8
26		2358 A. S. C.	6	+24 22	15.1	38.8	19 56 02.4	26.3	49.5
27		*h* Vulpeculæ	5	+24 30	32.5		19 56		6.5
28	31	2051 A. S. C.	6	— 4 03	43.1	4.5	17 49 26.2	48.0	9.5
29		ζ Serpentis	5	— 3 40	24.0	45.6	17 53 07.2	28.9	50.4
30		γ^2 Sagittarii	4	—30 25	48.0	13.0	17 56 38.2	3.4	28.5
31		2085 A. S. C.	5	—28 28	14.0	38.5	17 59 03.2	28.0	52.5
32		μ^1 Sagittarii	3.4	—21 06	31.5		18 05 17.7		
33	Sept. 6	Herculis	6	+28 58	35.6	0.0	18 15		15.5
34		*t* Herculis	5	+28 48	10.5	35.1	18 16 00.0	25.0	49.7
35		*d* Serpentis	6	+ 0 06	32.0	53.5	18 20 15.2	37.0	58.5
36		2132 A. S. C.	6	—18 30	32.3	55.0	18 23 18.0	41.0	3.7
37		*q* Clypei Sob.	6	—11 06	38.5	0.4	18 27 22.6	44.8	6.9
38		26 Sagittarii	6	—23 58	33.3	56.7	18 33 20.7	44.6	8.1
39		φ Sagittarii	4.5	—27 09	5.6	29.7	18 36 54.1	18.6	42.8
40		30 Sagittarii	6.7	—22 20	41.2	4.4	18 42 28.0	51.5	14.8
41		σ Sagittarii	3.4	—26 29	47.0	11.0	18 46 35.2	59.4	23.6
42		θ^1 Serpentis	4.5	+ 4 00	48.0	9.5	18 49 31.0	52.5	13.8
43		θ^2 Serpentis	5	+ 4 00			18 49 32.0	53.5	14.8
44		2195 A. S. C.	6.7	—22 55	26.5	50.0	18 53 13.5	37.0	0.5
45		Aquilæ		— 4 —		22.0	18 57 44.0	6.0	
46		*h* Aquilæ	6	— 4 16	1.5	23.0	18 57 45.0	7.0	28.3
47		ζ Aquilæ	3	+13 39	32.8	55.0	18 59 17.3	39.6	1.8
48		π Sagittarii	4.5	—21 16	43.0	6.0	19 01 29.4	52.8	15.8
49		B Aquilæ	5.6	— 8 12	30.6	52.0	19 05 14.0	36.2	57.6
50		1 Sagittæ	6	+20 57	51.5	14.5	19 09 37.7	1.0	23.9
51		β^2 Sagittarii	4	—45 05	53.3	23.6	19 12 54.6	25.6	56.0

August 30.—No. 6, 7. Besides θ^1 and θ^2 Serpentis, there is a third star in the field.
31.—Observations interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
18	33	11.26	— .098			+1	01.17	+0.56	18	32	09.99	1
18	37	50.02	— .060				.17		18	36	48.79	2
18	42	18.62	— .095				.18		18	41	17.35	3
18	46	31.98	— .095				.18		18	45	30.71	4
18	46	36.00	— .095				.18		18	45	34.73	5
18	49	20.50	— .057				.18		18	48	19.26	*6
18	49	22.10	— .057				.18		18	48	20.86	*7
18	53	04.32	— .095				.18		18	52	03.05	8
18	57	34.50	— .068				.18		18	56	33.25	9
18	57	35.50	— .069				.18		18	56	34.25	10
18	59	07.80	— .044	+1	01 21		.18		18	58	06.58	11
19	01	20.16	— .093				.18		19	00	18.89	12
19	05	04.82	— .074				.18		19	04	03.57	13
19	09	27.96	— .033				.18		19	08	26.75	*14
19	12	45.34	— .141				.18		19	11	44.02	15
19	15	37.00	— .104				.18		19	14	35.72	16
19	18	30.54	— .059		01.23		.18		19	17	29.30	17
19	22	29.40	— .094				.18		19	21	28.13	18
19	26	09.54	— .033				.18		19	25	08.33	19
19	29	21.90	— .073				.18		19	28	20.65	20
19	33	33.58	— .064				.19		19	32	32.33	21
19	39	43.74	— .048		01.17		.19		19	38	42.50	22
19	44	03.20	— .051		01.13		.19		19	43	01.96	23
19	48	31.92	— .055	+1	01.14		.19		19	47	30.68	24
19	52	43.06	— .037				.19		19	51	41.83	25
19	56	02.42	— .027				.19		19	55	01.20	26
19	56	19.45	— .027			+1	01.20	+0.56	19	55	18.22	27
17	49	26 26	+ .136			+1	02.35	+1.12	17	48	24.05	28
17	53	07.22	+ .135				.35		17	52	05.00	29
17	56	38.22	+ .217				.35		17	55	36.09	30
17	59	03.24	+ .210				.35		17	58	01.10	31
18	05	17.75	+ .185	+1	02.40	+1	02.36	+1.12	18	04	15.57	32
18	15	25.27	+ .020			+1	10.82	+1.50	18	14	14.47	33
18	16	00.06	+ .020				.83		18	14	49.25	34
18	20	15.24	+ .063				.83		18	19	04.47	35
18	23	18.00	+ .089				.83		18	22	07.26	36
18	27	22.64	+ .078				.84		18	26	11 88	37
18	33	20.68	+ .098				.84		18	32	09.94	38
18	36	54.16	+ .103				.85		18	35	43.41	39
18	42	27.98	+ .095				.85		18	41	17.22	40
18	46	35.24	+ .102				.86		18	45	24.48	41
18	49	30.96	+ .057				.86		18	48	20.16	42
18	49	31.87	+ .057				.86		18	48	21.07	43
18	53	13.50	+ .095				.86		18	52	02.73	44
18	57	44.00	+ .068				.87		18	56	33.20	45
18	57	44.96	+ .069				.87		18	56	34.16	46
18	59	17.30	+ .044	+1	10.89		.87		18	58	06.47	47
19	01	29.40	+ .093				.87		19	00	18.62	48
19	05	14.08	+ .074				.87		19	04	03.28	49
19	09	37.72	+ .033				.88		19	08	26.87	50
19	12	54.62	+ .141			+1	10.88	+1.50	19	11	43.88	51

Nos. 6, 7, 14. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 6	2255 A. S. C.	6	—28°10′	57.0	21.6	19 15 46.3	11.0	35.7
2	cont'd.	δ Aquilæ	3.4	+ 2 48	57.0	18.4	19 18 40.1	1.8	23.1
3		Moon I	(10.8)	—25 28	51.0	15.7	19 22 40.7	5.7	30.3
4		β^1 Cygni	3	+27 38	41.0	5.3	19 25 30.0	54.7	19.0
5		Cygni		+27 —	43.5		19 25	57.0	
6		h^2 Sagittarii	5	—25 14	25.2	49.0	19 28 13.0	37.0	0.8
7		45 Aquilæ	6	— 0 59	0.0	21.5	19 33 43.2	4.9	26.3
8		γ Aquilæ	3	+10 14	9.5	31.2	19 39 53.4	15.6	37.3
9		57 Sagittarii	6	—19 27	22.5	45.5	19 44 08.7	31.8	54.8
10		β Aquilæ	3.4	+ 6 01	58.0	19.5	19 48 41.4	3.4	25.0
11		γ Sagittæ	4.5	+19 04	7.0	29.7	19 52 52.6	15.6	38.3
12		2358 A. S. C.	6	+24 22	24.5	48.0	19 56 12.0	36.0	59.5
13		*h* Vulpeculæ	5	+24 30	41.0	4.8	19 56 28.8		16.3
14	7	2051 A. S. C.	6	— 4 03	28.5	50.0	17 49 11.6	33.3	54.8
15		ζ Serpentis	5	— 3 40	9.5	31.0	17 52 52.7	14.5	36.0
16		γ^2 Sagittarii	4	—30 25	33.2	58.0	17 56 23.2	48.5	13.3
*17		S^2 Ophiuchi	4	+ 9 33	52.5	14.2	18 00 36.3	58.4	20.3
18		μ^1 Sagittarii	3.4	—21 06	16.6	39.8	18 05 03.0	26.3	49.5
19		δ Sagittarii	3.4	—29 53	46.5	11.5	18 11 36.6	1.7	26.7
20		Herculis	6	+28 58	13.0	37.5	18 15	27.0	51.8
21		ι Herculis	5	+28 48	48.0	12.2	18 15 37.1	2.0	26.7
22		*d* Serpentis	6	+ 0 06	9.0	30.5	18 19 52.2	14.0	35.5
23		2132 A. S. C.	6	—18 30	9.6	32.2	18 22 55.0	18.0	40.5
24		*q* Clypei Sob.	6	—11 06	16.2	38.0	18 27 00.1	22.2	44.0
25		26 Sagittarii	6	—23 58	10.0	33.6	18 32 57.5	21.5	45.0
26		φ Sagittarii	4 5	—27 09	42.6	6.6	18 36 31.1	55.6	19.5
27		30 Sagittarii	6	—22 20	18.1	41.3	18 42 05.0	28.6	51.8
28		σ Sagittarii	3	—26 29	24.0	48.0	18 46 12.3	36.6	0.5
29		θ^1 Serpentis	4.5	+ 4 00	24.0	45.1	18 49 07.0	29.0	50.0
30		θ^2 Serpentis	5	+ 4 00			18 49 08.4	30.3	51.4
31		*h* Aquilæ	6	— 4 16	38.7	0.0	18 57 22.0	44.0	5.3
32		ζ Aquilæ	3	+13 38	9.5	31.4	18 58 54.2	17.0	38.9
33		π Sagittarii	4.5	—21 16	20.0	43.0	19 01 06.6	30.0	52.9
34		1 Sagittæ	6	+20 57	28.5	51.2	19 09 15.0		
35		δ Aquilæ	3.4	+ 2 48	33.8	55.3	19 18 17.0	38.8	0.3
36		β^1 Cygni	3	+27 38	18.2	42.5	19 25 07.2	32.0	56.3
*37		Cygni	4.5	+27 40			19 25 09.2	34.0	
38		h^2 Sagittarii	6	—25 14	2.2	25.8	19 27 49.9	14.0	37.5
39		45 Aquilæ	6	— 0 59	37.0	58.5	19 33 20.2	42.0	3.3
40		γ Aquilæ	3	+10 14	46.5	8.2	19 39 30.3	52.4	14.3
41		57 Sagittarii	5.6	—19 27	0.0	22.6	19 43 45.7	8.8	31.4
42		β Aquilæ	3.4	+ 6 01	35.2	56.6	19 48 18.4	40.3	1 8
43		γ Sagittæ	4.5	+19 04	44.1	6.6	19 52 29.5	52.5	14.7
44		2358 A. S. C.	6	+24 22	1.6	25.0	19 55 49.0	13.0	36.5
45		*h* Vulpeculæ	5	+24 30	18.0	41.8	19 56		53.2
46		*i* Vulpeculæ	5.6	+23 10	5.0	28.2	20 00 52.1	16.0	39.3
47		18 Vulpeculæ	6	+26 26	56.0	19.9	20 04 44.1	8.3	32.3
*48		α^2 Capricorni	3	—13 02	17.8	39.8	20 10 02.1	24.4	46.4
49		Moon I	(11.8)	—22 12	53.2	17.0	20 15 41.3	5.6	29.4
50		π Capricorni	5	—18 44	15.7	38.3	20 19 01.3	24.3	47.0
51		*i* Cygni	4.5	+29 50	53.0	17.7	20 23 42.7	7.8	32.5
52		η Delphini	6	+12 29	30.2	52.0	20 27 14.3	36.6	58.6

September 6.—Set back the chronometer.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
19	15	46.32	+ .104			+1	10.88	+1.50	19	14	35.54	1
19	18	40.08	+ .059	+1	10.96		.88		19	17	29.26	2
19	22	40.68	+ .100				.88		19	21	29.90	3
19	25	30.00	+ .022				.89		19	24	19.13	4
19	25	32.33	+ .022				.89		19	24	21.46	5
19	28	13.00	+ .100				.89		19	27	02.21	6
19	33	43.16	+ .064				.89		19	32	32.33	7
19	39	53.40	+ .048		11.00		.90		19	38	42.55	8
19	44	06.66	+ .090				.90		19	42	57.85	9
19	48	41.46	+ .055	+1	10.85		.91		19	47	30.60	10
19	52	52.64	+ .037				.91		19	51	41.77	11
19	56	12.00	+ .027				.92		19	55	01.11	12
19	56	28.73	+ .027			+1	10.92	+1.50	19	55	17.84	13
17	49	11.64				+0	47.71	+1.84	17	48	23.93	14
17	52	52.74					.72		17	52	05.02	15
17	56	23.24					.72		17	55	35.52	16
18	00	36.34					.73		17	59	48.61	*17
18	05	03.04		+0	47.75		.73		18	04	15.31	18
18	11	36.60					.74		18	10	48.86	19
18	15	02.28					.74		18	14	14.54	20
18	15	37.20					.75		18	14	49.45	21
18	19	52.24					.75		18	19	04.49	22
18	22	55.06					.75		18	22	07.31	23
18	27	00 10					.76		18	26	12.34	24
18	32	57.52					.77		18	32	09.75	25
18	36	31.08					.77		18	35	43.31	26
18	42	04.96					.78		18	41	17.18	27
18	46	12.28					.78		18	45	24.50	28
18	49	07.02					.79		18	48	19.23	29
18	49	08.37					.79		18	48	20.58	30
18	57	22.00					.80		18	56	34.20	31
18	58	54.20			47.76		.80		18	58	06.40	32
19	01	06.50					.80		19	00	18.70	33
19	09	14.89					.81		19	08	27.08	34
19	18	17.04			47.87		.82		19	17	29.22	35
19	25	07.24					.82		19	24	19.42	36
19	25	09.23					.82		19	24	21.41	*37
19	27	49.88					.83		19	27	02.05	38
19	33	20 20					.84		19	32	32.36	39
19	39	30.34			47.90		.84		19	38	42.50	40
19	43	45.70					.85		19	42	57.85	41
19	48	18.46			47.81		.85		19	47	30.61	42
19	52	29.48					.86		19	51	41.62	43
19	55	49.02					.86		19	55	01.16	44
19	56	05.60					.86		19	55	17.74	45
20	00	52.12					.87		20	00	04.25	46
20	04	44.12					.87		20	03	56.25	47
20	10	02.10		+0	47.83		.88		20	09	14 22	*48
20	15	41.30					.89		20	14	53.41	49
20	19	01.32					.89		20	18	13.43	50
20	23	42.74					.90		20	22	54.84	51
20	27	14.34				+0	47.90	+1.84	20	26	26.44	52

Nos. 17, 48. Two stars in the field of the instrument.
37. A beautiful bluish star.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 7	υ Capricorni	5	−18°42′	2.5	25.0	20 31 48.2	11.4	33.6
2	8	25 Vulpeculæ	6	+23 56	16.5	40.0	20 16 03.7	27.5	50.9
3		π Capricorni	5	−18 44	17.8	40.3	20 19 03.2	26.2	48.9
4		i Cygni	4.5	+29 50	54.9	19.4	20 23 44.5	9.5	34.0
5		η Delphini	6	+12 29	32.0	53.9	20 27 16.2	38.5	0.3
6		υ Capricorni	5	−18 42	4.5	27.0	20 31 50.0	13.0	35.5
7		δ Delphini	5	+14 30	8.0	30.0	20 36 52.5	15.0	37.0
8		ζ Equulei	6	+ 4 52	46.6	8.1	20 57 30.0	52.0	13.5
9		ν Aquarii	5	−12 01	2.0	24.0	21 01 46.2	8.4	30.3
10		Moon I	(12.8)	−17 48	34.3	57.8	21 07 20.8	44.3	7.3
11		r Capricorni	6	−18 39	6.7	29.2	21 09 52.2	15.8	37.8
12		ι Capricorni	5	−17 30	28.5	51.0	21 14 13.9	36.8	59.3
13		ζ Capricorni	4	−23 06	38 8	2.0	21 18 25.6	49.2	12.5
14		β Aquarii	3	− 6 16	18.2	39.9	21 24 01.6	23.4	45.3
15		8 Piscis Aus.	6	−26 53	59.6	23.6	21 27 48.0	12.5	36.5
16		γ Capricorni	4	−17 23	22.0	44.3	21 32 07.1	29.8	2.2
17		α Pegasi	2	+14 21	56.6	18.8	22 57 41.2	3.6	25.8
18		α Andromedæ	1	+28 13	12.5	36.8	0 01 01.4	26.0	50.4
19		γ Pegasi	2.3	+14 18	9.2	31.5	0 05 54.0	16.4	38 6
20		β Ceti	2.3	−18 52	41.5	4.0	0 36 27.1	50.2	12.7
21	10	ε Pegasii	2.3	+ 9 09	31.0	52.6	21 37 14.8		
22		ν Aquarii	5	−21 31	5.6	28.9	22 26 52.2	15.5	38.8
23		r^2 Aquarii	5.6	−14 26	18.2	40.3	22 42 02.8	25.2	47.5
24		λ Aquarii	4	− 8 25	27.8	49.5	22 45 11.5		
25		Moon I	(14.9)	− 6 29	43.1	·5.2	22 46 27.8	50.3	12.3
26		α Piscis Aus.	1	−30 28	54.0	18.8	22 49 44.0	9.2	34.0
27		x^2 Piscium	6	− 0 40	38.0	59.5	22 53 21.2	43.0	4.5
28		α Pegasi	2	+14 21	58.7	20.7	22 57 43.1	5.5	27.6
29		A Piscium	6	+ 1 16	41.5	3.0	23 01 24.8	46.5	8.0
30		φ Aquarii	5	− 6 54	14.2	36.0	23 06 58.0	20.0	41.8
31	11	σ Aquarii	5	−11 29	23.0	45.0	22 23 07.2	29.5	51.5
32		ν Aquarii	6	−21 31	6.5	29.8	22 26 53.1	16.5	39.8
33		κ Aquarii	5.6	− 5 03	41.2	3.0	22 30 24.8	46.6	8.4
34		45 Pegasi	6	+18 32	52.0	15.0	22 38 37.8	0.6	23.5
35		r^2 Aquarii	5	−14 26	19.1	41.2	22 42 03.7	26.2	48.3
36		λ Aquarii	4	− 8 25	29.0	50.6	22 45 12.5	34.5	56.0
37		α Piscis Aus.	1	−30 28	54.5	19.5	22 49 45.0	10.5	35.5
38		x^2 Piscium	6.7	− 0 40	38.8	0.3	23 53 22.1	43.8	5.3
39		α Pegasi	2	+14 21	59.5	21.5	22 57 44.1	6.7	28.7
40		A Piscium	6	+ 1 16	42.5	4.0	23 01 25.8	47.5	9.0
41		φ Aquarii	5	− 6 54	15.2	36.8	23 06 58.8	20.8	42.4
42		γ Ap. Sculp.	5	−33 24	16.0	41.6	23 11 07.7	33.9	59.5
43		b^1 Aquarii	5	−20 58	44.4	7.2	23 15 30.5	53.9	16.8
*44		Georgian		− 5 21	34.0	55.5	23 19 17.2	39 0	0.5
45		b^4 Aquarii	5	−21 47	4.2	27.2	23 25 50.6	14.0	37.0
46		ι Piscium	4.5	+ 4 46	56.5	18.0	23 32 39.7	1.5	23.0
47		λ Piscium	5	+ 0 54	6.3	27.8	23 34 49.5	11.2	32.6
48		Moon II	(15.9)	− 0 02	52.5	14.2	23 37 36.5	58.8	20.6
49		μ Piscium	5.6	− 3 39	56.3	17.9	23 40 39.6	1.5	22.3
50		22 Piscium	6	+ 2 03	0.0	21.2	23 44 43.0	4.9	26.2

September 8 – ☽ ☌ ι Capricorni.
10.—Flying clouds. The observations are somewhat doubtful.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	s.	m. s.	m. s.	s.	h. m. s.	
20 31 48.14			+0 47.91	+1.84	20 31 00.28	1
20 16 03.72			+0 49.63	+1.51	20 15 14.09	2
20 19 03.28			.64		20 18 13.64	3
20 23 44.46			.64		20 22 54.82	4
20 27 16.18			.64		20 26 26.54	5
20 31 50.00			.65		20 31 00.35	6
20 36 52.50			.65		20 36 02.85	7
20 57 30.04			.67		20 56 40.37	8
21 01 46.18			.68		21 00 56.50	9
21 07 20.80			.68		21 06 31.12	10
21 09 52.24			.69		21 09 02.55	11
21 14 13.90			.69		21 13 23.21	12
21 18 25.62			.69		21 17 35.93	13
21 24 01.68		+0 49.77	.70		21 23 11.98	14
21 27 48.04			.70		21 26 58.34	15
21 32 07.08			.71		21 31 17.37	16
22 57 41.20		49.65	.79		22 56 51.41	17
0 01 01.42		49.90	.85		0 00 11.57	18
0 05 53.94		49.87	.86		0 05 04.08	19
0 36 27.10		+0 49.76	+0 49.89	+1.51	0 35 37.21	20
21 37 14.77		+0 51.33	+0 51.51	+0.90	21 36 23.26	21
22 26 52.20			.53		22 26 00.67	22
22 42 02.80			.53		22 41 11.27	23
22 45 11.53			.53		22 44 20.00	24
22 46 27.74			.53		22 45 36.21	25
22 49 44.00		51.69	.54		22 48 52.46	26
22 53 21.24			.54		22 52 29.70	27
22 57 43.12		+0 51.56	.54		22 56 51.58	28
23 01 24.76			.54		23 00 33.22	29
23 06 58.00			+0 51.55	+0.90	23 06 06.45	30
22 23 07.24			+0 52.57	+0.75	22 22 14.67	31
22 26 53.14			.58		22 26 00.56	32
22 30 24.80			.58		22 29 32.22	33
22 38 37.78			.58		22 37 45.20	34
22 42 03.70			.59		22 41 11.11	35
22 45 12.52			.59		22 44 19.93	36
22 49 45.00		+0 52.69	.59		22 48 52.41	37
22 53 22.06			.59		22 52 29.47	38
22 57 44.10		52.54	.59		22 56 51.51	39
23 01 25.76			.59		23 00 33.17	40
23 06 58.80			.60		23 06 06.20	41
23 11 07.74			.60		23 10 15.14	42
23 15 30.56			.60		23 14 37.96	43
23 19 17.24			.60		23 18 24.64	*44
23 25 50.60			.61		23 24 57.99	45
23 32 39.74		+0 52.54	.61		23 31 47.13	46
23 34 49.48			.61		23 33 56.87	47
23 37 36.52			.61		23 36 43.91	48
23 40 39.52			.61		23 39 46.91	49
23 44 43.06			+0 52.61	+0.75	23 43 50.45	50

No. 44. The centre of the Georgian was observed.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 11 cont'd.	26 Piscium	6.7	+ 6°11′	10.0	31.5	23 47 53.2	15.0	36.5
2		ω Piscium	4.5	+ 5 59	19.0	40.5	23 52 02.3	24.2	45.7
3		α Andromedæ	1	+28 13	15.0	39.5	0 01 04.2	29.0	53.5
4		γ Pegasi	2.3	+14 18	12.1	34.2	0 05 56.6	19.1	41.3
5		β Ceti	2.3	—18 52	44.5	7.0	0 36 30.0	53.0	15.5
6		δ Piscium	5	+ 6 43	36.6	58.0	0 41 19.7	41.5	3.1
7	12	ε Piscium	4.5	+ 4 46	57.0	18.4	23 32 40.2	2.0	23.4
8		λ Piscium	5	+ 0 54	6.7	28.1	23 34 49.9	11.7	33.3
9		n Piscium	5.6	— 3 39	56.9	18 2	23 40 40.0	1.9	23 2
10		22 Piscium	6	+ 2 03	0.2	21.7	23 44 43.5	5.2	26.8
11		26 Piscium	6.7	+ 6 11	10.2	31.8	23 47 53.7	15.6	37.3
12		ω Piscium	4.5	+ 5 59	19.5	41.0	23 52 03.0	25.0	46.5
13		c^2 Piscium	6	+ 7 36	32 5	54.2	23 55 16.0	37.8	59.3
14		α Andromedæ	1	+28 13	15.5	39.9	0 01 04.7	29.5	53.9
15		γ Pegasi	2.3	+14 18	12.4	34.6	0 05 57.0	19.4	41.5
16		ι Ceti	4	— 9 42	29.6	51.2	0 12 13.3	35.5	57.3
17		9 Ceti	6	—13 06	52.5	14.5	0 15 36.8	59.2	21.3
18		α Phœnicis	2	—43 10	20.0	49.5	0 19 19.5	49.5	19.0
19		n Ceti	6	— 4 50	6.1	27.7	0 22 49.5	11.2	52.7
20		Moon II	(17.0)	+ 6 32	53.2	15.0	0 27 37.3	59.7	21.5
21		ε Andromedæ	4	+28 27	15.0	39.2	0 31 04.0	28.7	53.0
22		β Ceti	2.3	—18 52	44.7	7.2	0 36 30.3	53.4	15.8
23		δ Piscium	5	+ 6 43	36.6	58.0	0 41 20.0	42.0	3.5
24		m Ceti	5	— 2 01	3.7	25.2	0 45 47.0	8.8	30.3
25		η Andromedæ	5	+22 33	50.8	14.0	0 49 37.2	0.5	23.6
26		α Ap. Sculp.	5	—30 13	0.5	25.3	0 51 50.6	16.0	40.8
27		ε Piscium	4.5	+ 7 02	52.0	13.6	0 55 35.6	57.6	19.3
28	13	α Phœnicis	2	—43 10	20.5	49.5	0 19 19.8	50.0	19.0
29		n Ceti	6	— 4 50	6.2	27.7	0 22 49.7	11.7	33.2
30		49 A. S. C.	6.7	+12 30	51.2	13.0	0 27 35.4	57.8	19.7
31		ε Andromedæ	4	+28 27	15.2	39.3	0 31 04.1	29.0	53.2
32		β Ceti	2 3	—18 52	45.1	7.8	0 36 30.8	53.8	16.6
33		δ Piscium	5	+ 6 43	37.0	58.5	0 41 20.4	42.3	3.8
34		m Ceti	5	— 2 01	4.0	25.5	0 45 47.2	9.0	30.5
35		η Andromedæ	5	+22 33	51.3	14.5	0 49 38.0	1.5	24.7
36		α Ap. Sculp.	5	—30 13	1.2	26.0	0 51 51.1	16.2	41 0
37		ε Piscium	4.5	+ 7 02	52.6	14.2	0 55 36.0	57.9	19.5
38		τ Piscium	6	+29 15	59.7	24.3	1 03 49.3	14.4	39.0
39		38 Ceti	6	— 1 50	53.1	14.7	1 07 36.5	58.2	19.8
40		40 Ceti	6.7	— 3 07	1.7	23.2	1 09 45.0	6.9	28.3
41		l Piscium	6	+27 54	26.1	50.3	1 13 13.0	39.7	3 9
42		θ^1 Ceti	3	— 9 00	15.2	37.0	1 16 59.0	21.0	42.8
43		Moon II	(18.0)	+12 54	6.0	28.2	1 19 51.0	13.8	36.0
44		η Piscium	4	+14 31	8.3	30.6	1 23 53.1	15.6	37.8
45		49 Ceti	6	—16 30	1.0	23.2	1 27 46.0	8.8	31.0
46		109 Piscium	6.7	+19 17	23.8	46.2	1 37 09.5	32.7	55.0
47		Ceti	7	—11 32	45.0		1 42		13.5
48		χ^2 Ceti	5	—11 29	56.8	18.5	1 42 41.0	3.4	25.3
49		β Arietis	3	+20 01	0.4	23.1	1 46 46.4	9.7	32.5
50	14	θ^1 Ceti	3	— 9 00	17.0	39.0	1 17 00.9	22.8	44.8

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
23	47	53.24				+0	52.61	+0.75	23	47	00.63	1
23	52	02.34					.61		23	51	09.73	2
0	01	04.24		+0	52.69		.62		0	00	11.62	3
0	06	56.66			52.56		.62		0	05	04.04	4
0	36	30.00		+0	52.62		.63		0	35	37.37	5
0	41	19.78				+0	52.64	+0.75	0	40	27.14	6
23	32	40.20	+ .152	+0	53.15	+0	53.11	+0.44	23	31	47.24	7
23	34	49.94	+ .166				.11		23	33	57.00	8
23	40	40.04	+ .183				.11		23	39	47.11	9
23	44	43.48	+ .162				.11		23	43	50.53	10
23	47	53.72	+ .147				.11		23	47	00.76	11
23	52	03.00	+ .146				.11		23	51	10.04	12
23	55	15.96	+ .141				.11		23	54	22.99	13
0	01	04.70	+ .057		53.19		.11		0	00	11.65	14
0	06	56.98	+ .116		52.98		.11		0	05	03.99	15
0	12	13.34	+ .205				.11		0	11	20.43	16
0	15	36.76	+ .218				.11		0	14	43.87	17
0	19	19.50	+ .367				.11		0	18	26.76	18
0	22	49.44	+ .187				.11		0	21	56.52	19
0	27	37.34	+ .146				.11		0	26	44.38	20
0	31	03.98	+ .056				.11		0	30	10.93	21
0	36	30.28	+ .241	+0	53.13		.12		0	35	37.40	22
0	41	20.02	+ .145				.12		0	40	27.04	23
0	45	47.00	+ .177				.12		0	44	54.06	24
0	49	37.22	+ .082				.12		0	48	44.18	25
0	51	50.64	+ .292				.12		0	50	57.81	26
0	55	35.62	+ .144			+0	53.12	+0.44	0	54	42.64	27
0	19	19.76	+ .407			+0	53.65	+1.16	0	18	26.52	28
0	22	49.70	+ .208				.66		0	21	56.25	29
0	27	35.42	+ .137				.66		0	26	41.90	30
0	31	04.16	+ .062				.66		0	30	10.56	31
0	36	30.82	+ .268	+0	53.68		.67		0	35	37.42	32
0	41	20.40	+ .161				.67		0	40	26.89	33
0	45	47.24	+ .197				.68		0	44	53.76	34
0	49	38.00	+ .091				.68		0	48	44.41	35
0	51	51.10	+ .324				.68		0	50	57.74	36
0	55	36.04	+ .160				.68		0	54	42.52	37
1	03	49.34	+ .057				.68		1	02	55.72	38
1	07	36.46	+ .196				.69		1	06	42.97	39
1	09	45.02	+ .201				.69		1	08	51.53	40
1	13	15.00	+ .064				.69		1	12	21.37	41
1	16	59.00	+ .225	+0	53.68		.69		1	16	05.53	42
1	19	51.00	+ .135				.70		1	18	57.43	43
1	23	53.08	+ .128				.70		1	22	59.51	44
1	27	46.00	+ .257				.70		1	26	52.56	45
1	37	09.44	+ .107				.71		1	36	15.84	46
1	42	29.20	+ .107				.71		1	41	35.60	47
1	42	41.00	+ .236				.71		1	41	47.53	48
1	46	46.42	+ .104			+0	53.72	+1.16	1	45	52.80	49
1	17	00.90	+ .075	+0	55.42	+0	55.30	+1.85	1	16	05.67	50

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 14	η Piscium	4	+14°31′	10.5	32.6	1 23 55.0	17.5	39.7
2	cont'd.	49 Ceti	6	—16 30	2.8	25.5	1 27 48.0	10.5	33.3
*3		105 Piscium	6	+15 36	18.0	40.3	1 32 02.7	25.2	47.5
4		109 Piscium	6.7	+19 17	25.8	48.5	1 37 11.5	34.6	57.4
5		Ceti	7	—11 —	47.0		1 42 31.0		15.3
6		χ^2 Ceti	5	—11 29	58.6	20.6	1 42 42.8	5.0	27.0
7		β Arietis	3	+20 01	2.2	25.0	1 46 48.1	11.2	33.9
*8		υ^2 Ceti	4.5	—21 51	40.5	3.5	1 53 27.0	50.5	13.5
9		α Arietis	3	+22 42	22.5	45.4	1 59 09.2	33 0	56.0
10		15 Arietis	6	+18 45	0.0	22.2	2 02 45.3	8.3	30.6
11		ξ^1 Ceti	5	+ 8 06	47.1	8.7	2 05 30.8	52.8	14.5
12		θ^1 Arietis	6	+19 10	27.7	50.4	2 10 13.4	36.5	59.3
13		Moon II	(19.0)	+18 39	39.6	3.0	2 15 26.4	49.9	13.3
*14		c Trianguli	6	+28 57	57.2	22.2	2 19 47.3	12.3	37.3
15		ψ Arietis	6	+17 00	16.4	39.0	2 23 01.7	24.4	46.8
16		e^1 Ceti	6	— 8 33	4.5	26.2	2 27 48.0	10.0	31.6
17		ν Arietis	5.6	+21 16	57.6	20.6	2 30 43.9	7.2	30.2
18		γ Ceti	3	+ 2 34	16.6	38.0	2 35 59.9	21.8	43.2
19		b Arietis	5	+28 35	34.1	58.5	2 39 23.2	48.0	12.6
20		υ Fornacis	7.8	—38 04	19.0	46.0	2 43 13.6	41.2	8 2
21		ε Arietis	5	+20 42	17.6	40.4	2 51 03.6	26.8	49.7
*22		α Ceti	2.3	+ 3 28	10.9	32.3	2 54 54.2	16.0	37.4
23	15	ν Arietis	5.6	+21 16	59.0	22.1	2 30 45.5	9.0	32.0
24		γ Ceti	3	+ 2 34	18.5	40.0	2 36 01.7	23.5	45.0
25		b Arietis	5	+28 35	36.0	0.4	2 39 25.2	50.0	14.4
26		ρ^2 Arietis	6	+17 41	5.2	27.8	2 47 50.7	13.5	36.0
27		ε Arietis	5	+20 42	19.2	42.2	2 51 05.4	28.7	51.8
28		α Ceti	2.3	+ 3 28	12.8	34.2	2 54 56.0	17.8	39.3
29		53 Arietis	6	+17 13	41.5	4.0	2 59 26.9	49.6	12.0
30		δ Arietis	4	+19 07	44.8	7.3	3 03 30.4	53.5	16.0
*31		ζ Eridani	4	— 9 25	20.8	42.3	3 09 04.5	26.8	48.6
32		15 Eridani	5.6	—23 06	31.5	55.0	3 12 18.5	42.0	5.5
33		Moon II	(20.1)	+23 22	18.5	42.6	3 15 06 8	31.0	55.0
34		g Arietis	6	+24 09			3 15	17.5	41.3
35		17 Eridani	4.5	— 5 37	58.5	20.0	3 23 41.8	3 5	25.0
36		t^2 Eridani	4	—22 10	57.2	20.2	3 27 43.5	7.0	30.0
37		21 Eridani	6	— 6 08	24.6	46.0	3 32 07.8	29.6	51.0
38		g Pleiadum	5.6	+23 47		55.5	3 36 19.5	43.5	7.3
39		b Pleiadum	4.5	+23 37	37.0	0.3	3 36 23.9	47.5	10.8
*40		η Tauri	3	+23 37	13.0	36.4	3 39 00.0	23.6	47.0
41	16	g Arietis	5.6	+24 09	7.7	31.2	3 15 55.0	18.9	42.3
42		ξ Tauri	4	+ 9 10	49.0	10.7	3 19 32.8	54.8	16.5
43		17 Eridani	4.5	— 5 37	59.7	21.2	3 23 43.2	5.1	26.6
44		t^2 Eridani	4	—22 10	58.8	21.8	3 27 45.4	8.9	31.9
45		21 Eridani	6	— 6 08	26.2	47.7	3 32 09.6	31.5	53.0
46		g Pleiadum	5.6	+23 47	34.0	57.2	3 36 21.0	44.9	
47		b Pleiadum	4.5	+23 37	38.8	2.0	3 36 25.9	49.8	13.0
*48		η Tauri	3	+23 37	14.6	38.0	3 39 01.8	25.5	48.9
*49		426 A. S. C.	5	—38 07	48.8	15.8	3 43 43.5	11.1	38.0
*50		32 Eridani	5.6	— 3 26	34.5	56.0	3 47 17.7	39.5	1.0
51		γ^1 Eridani	2.3	—13 58	51.5	13.5	3 51 36.0	58.5	20.5

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
1	23	55.06	+ .042			+0	55.32	+1.85	1	22	59.78	1
1	27	48.02	+ .086				.32		1	26	52.79	2
1	32	02.74	+ .041				.33		1	31	07.45	*3
1	37	11.56	+ .035				.33		1	36	16.26	4
1	42	31.07	+ .078				.34		1	41	35.81	5
1	42	42.80	+ .079				.34		1	41	47.54	6
1	46	48.08	+ .034				.34		1	45	52.77	7
1	53	27.00	+ .093				.35		1	52	31.74	*8
1	59	09.22	+ .030	+0	55.42		.36		1	58	13.89	9
2	02	45.28	+ .036				.36		2	01	49.96	10
2	05	30.78	+ .052				.37		2	04	35.48	11
2	10	13.46	+ .035				.37		2	09	18.12	12
2	15	26.44	+ .036				.37		2	14	31.11	13
2	19	47.26	+ .019				.38		2	18	51.90	*14
2	23	01.66	+ .039				.38		2	22	06.32	15
2	27	48.06	+ .074				.39		2	26	52.74	16
2	30	43.90	+ .032				.39		2	29	48.54	17
2	35	59.90	+ .059		55.33		.40		2	35	04.56	18
2	39	23.28	+ .020				.40		2	38	27.90	19
2	43	13.60	+ .124				.41		2	42	18.31	20
2	51	03.62	+ .033				.42		2	50	08.23	21
2	54	54.16	+ .058	+0	55.32	+0	55.42	+1.85	2	53	58.80	*22
2	30	45.52	+ .032	+0	57.15	+0	57.12	+1.72	2	29	48.43	23
2	36	01.74	+ .059				.13		2	35	04.67	24
2	39	25.20	+ .020				.13		2	38	28.09	25
2	47	50.64	+ .039				.14		2	46	53.54	26
2	51	05.46	+ .033				.15		2	50	08.34	27
2	54	56.02	+ .058		57.15		.15		2	53	58.93	28
2	59	26.80	+ .039				.16		2	58	29.68	29
3	03	30.40	+ .035				.16		3	02	33.27	30
3	09	04.60	+ .076				.16		3	08	07.52	*31
3	12	18.50	+ .096				.17		3	11	21.43	32
3	15	06.78	+ .029				.17		3	14	09.64	33
3	15	53.70	+ .028				.17		3	14	56.56	34
3	23	41.76	+ .070				.18		3	22	44.65	35
3	27	43.58	+ .094				.19		3	26	46.48	36
3	32	07.80	+ .071				.19		3	31	10.68	37
3	36	19.63	+ .028				.20		3	35	22.46	38
3	36	23.90	+ .029				.20		3	35	26.73	39
3	39	00.00	+ .029	+0	57.17	+0	57.20	+1.72	3	38	02.83	*40
3	15	55.02				+0	58.81	+1.65	3	14	56.21	41
3	19	32.76					.81		3	18	33.95	42
3	23	43.16					.82		3	22	44.34	43
3	27	45.36					.82		3	26	46.54	44
3	32	09 60					.82		3	31	10.78	45
3	36	21.08					.83		3	35	22.25	46
3	36	25.90					.83		3	35	27.07	47
3	39	01.76		+0	58.89		.83		3	38	02.93	*48
3	43	43.44					.83		3	42	44.61	*49
3	47	17.74					.84		3	46	18.90	*50
3	51	36.00		+0	58.82	+0	58.84	+1.65	3	50	37.16	51

Nos. 3, 8, 22, 31. Two stars in the field of the instrument.
14. Three stars in the field.
40, 48. Four stars in the field.
49. A double star, being of the 5 and 6 magnitudes, respectively.
50. Also double, one of the 5.6 and the other of the 6.7 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 16	ν Tauri	5	+ 5°32′	58.0	19.5	3 55 41.2	3.0	24.5
2	cont'd.	454 A. S. C.	6.7	+16 54	7.5	30.0	3 59 52.6	15.3	37.8
3		37 Eridani	5.6	− 7 21	53.0	14.5	4 03 36.4	58.3	20.0
4		μ Tauri	5	+ 8 29	9.6	31.2	4 07 53.2	15.2	36.8
5		γ Tauri	3.4	+15 14	59.5	21.7	4 11 44.1	6.5	28.8
6		Moon II	(21.1)	+26 36	56.5	21.3	4 18 46.6	11.9	36.7
7		α Tauri	1	+16 11	2.1	24.4	4 27 47.0	9.6	32 0
8		τ Tauri	5	+22 39	54.5	17.8	4 33 41.4	5.0	28.3
9		5 Orionis	6	+ 2 15	21.0	42.5	4 46 04.2	26.0	47.5
10		b Eridani	6	− 5 25	50.0	11.5	4 49 33.3	55.1	16.6
11		ι Tauri	4.5	+21 21	48.2	11.1	4 54 34.5	57.9	20.8
12	21	α Aquilæ	1.2	+ 8 27	24.5	46.0	19 44 08.0	30.0	51.5
13		β Aquilæ	3.4	+ 6 01	53.2	14.8	19 48 36.8	58.8	20.3
14	23	δ Aquilæ	3.4	+ 2 48	55.9	17.2	19 18 39.0	0.9	22.2
15		γ Aquilæ	3	+10 14	8.6	30.2	19 39 52.3	14.4	36.1
16		α Aquilæ	1.2	+ 8 27	28.1	49.8	19 44 11.8	33.8	55.5
17		β Aquilæ	3.4	+ 6 01	57.2	18.8	19 48 40.6	2.5	24.1
18	Oct. 3	φ Sagittarii	4.5	−27 09	12.7	37.2	18 37 01.5	25.8	50.3
19		Moon I	(8.2)	−26 20	58.7	23.5	18 59 48.5	13.5	38.4
20		π Sagittarii	4.5	−21 16	50.0	13.1	19 01 36.5	59.9	23.0
*21		α Sagittarii	4.5	−40 54	12.0	40.2	19 14 09.2	38.0	6.3
*22		b Vulpeculæ	4.5	+24 21	36.2	59.8	19 23 23.5	47.3	11.0
23		h^2 Sagittarii	4.5	−25 14	32.2	56.0	19 28 19.9	43.7	7.6
24		α Sagittæ	4	+17 39	32.6	55.0	19 34 17.8	40.5	2.9
25		γ Aquilæ	3	+10 14	16.7	38 5	19 40 00.6	22.7	44.5
26		α Aquilæ	1.2	+ 8 27	36.2	58.0	19 44 20.1	42.1	4.0
27		β Aquilæ	3.4	+ 6 01	5.2	26.9	19 48 48.8	10.7	32.3
*28	4	φ Sagittarii	4.5	−27 09	13.4	37.2	18 37 01.5	25.9	49.9
29		σ Sagittarii	3	−26 29	54.0	17.9	18 46 42.2	6.6	30.5
30		ζ Sagittarii	3.4	−30 06	57.6	22.3	18 53 47.5	12.9	37.7
31		ζ Aquilæ	3	+13 38	40.2	2.2	18 59 24.7	47.2	9.2
32		π Sagittarii	4.5	−21 16	50.3	13.3	19 01 36.7	0.0	23.0
*33		d Sagittarii	5	−19 14	52.5	15.2	19 09 38 2	1.2	24.1
34		α Sagittarii	5	−40 54	12.0	40.5	19 14 09.2	38.0	6.6
35		δ Aquilæ	3.4	+ 2 48	4.5	25.7	19 18 47.7	9.6	30.9
*36		b Vulpeculæ	4.5	+24 21	36.6	0.0	19 23 24.0	48.0	11.3
*37		h^2 Sagittarii	4.5	−25 14	32.2	55.9	19 28 20.0	44.0	7.7
38		α Sagittæ	4	+17 39	32.8	55.1	19 34 18.2	41.2	3.5
39		γ Aquilæ	3	+10 14	17.0	38.8	19 40 00.9	23.0	44.9
40		α Aquilæ	1.2	+ 8 27	36.5	58.1	19 44 20.1	42.2	3.8
41		β Aquilæ	3.4	+ 6 01	5.6	27.1	19 48 49.0	11.0	32.5
42		Moon I	(9.2)	−23 38	27.7	51.6	19 52 16.2	40.9	4.8
43		c Sagittarii	5	−28 09		46.4	19 54 11.0	35.6	59.9
44		θ Aquilæ	3.4	− 1 18	42.0	3.2	20 04 25.0	46.9	8.3
45		a^2 Capricorni	3	−13 02	48.3	10.5	20 10 32.8	55.2	17.4
46		β^2 Capricorni	3.4	−15 17	38.3	0.6	20 13 23 3	46.0	8.3
47	5	γ Aquilæ	3	+10 14	23.1	44.9	19 40 07.1	29.2	51.1
48		α Aquilæ	1.2	+ 8 27	43.2	4.8	19 44 26.7	48.6	10.2

October 3.—The observation of α Sagittarii is doubtful.

4.—φ Sagittarii is recorded 18*h*. 36*m*. at transit over middle wire.

5.—The transit was moved in azimuth. The jump in the chronometer is inexplicable.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
3	55	41.24				+0	58.85	+1.65	3	54	42.39	1
3	59	52.64					.85		3	58	53.79	2
4	03	36.44					.85		4	02	37.59	3
4	07	53.20					.86		4	06	54.34	4
4	11	44.12					.86		4	10	45.26	5
4	18	46.60					.87		4	17	47.73	6
4	27	47.02		+0	58.83		.88		4	26	48.14	7
4	33	41.40					.89		4	32	42.51	8
4	46	04.24					.90		4	45	05.34	9
4	49	33.30					.91		4	48	34.39	10
4	54	34.50				+0	58.91	+1.65	4	53	35.59	11
19	44	08.00		+1	06.24	+1	06.27	+1.80	19	43	01.73	12
19	48	36.78		+1	06.31	+1	06.27	+1.80	19	47	30.51	13
19	18	39.04		+1	10.09	+1	10.07	+1.91	19	17	28.97	14
19	39	52.32			10.10		.10		19	38	42.22	15
19	44	11.80			10.04		.10		19	43	01.70	16
19	48	40.64		+1	10.16	+1	10.11	+1.91	19	47	30.53	17
18	37	01.50	+ .759			+1	18.88	+0.27	18	35	43.38	18
18	59	48.52	+ .750				.88		18	58	30.39	19
19	01	36.50	+ .689				.88		19	00	18.31	20
19	14	09.14	+ .962				.88		19	12	51.22	*21
19	23	23.56	+ .204				.88		19	22	04.88	*22
19	28	19.88	+ .736				.88		19	27	01.74	23
19	34	17.76	+ .281				.89		19	32	59.15	24
19	40	00.60	+ .360	+1	18.90		.89		19	38	42.07	25
19	44	20.08	+ .379		18.89		.89		19	43	01.57	26
19	48	48.78	+ .404	+1	18.89	+1	18.89	+0.27	19	47	30.29	27
18	37	01.58	+1.028			+1	19.34	+0.37	18	35	43.27	*28
18	46	42.24	+1.016				.35		18	45	23.91	29
18	53	47.60	+1.079				.35		18	52	29.33	30
18	59	24.70	+ .444	+1	19.15		.35		18	58	05.79	31
19	01	36.66	+ .931				.35		19	00	18.24	32
19	09	38.24	+ .900				.35		19	08	19.79	*33
19	14	09.26	+1.302				.35		19	12	51.21	34
19	18	47.68	+ .590		19.50		.35		19	17	28.92	35
19	23	23.98	+ .275				.35		19	22	04.90	*36
19	28	19.96	+ .995				.35		19	27	01.60	*37
19	34	18.16	+ .380				.36		19	32	59.18	38
19	40	00.92	+ .487		19.37		.36		19	38	42.05	39
19	44	20.14	+ .512		19.09		.36		19	43	01.29	40
19	48	49.04	+ .546		19.31		.36		19	47	30.23	41
19	52	16.24	+ .968				.36		19	50	57.85	42
19	54	11.00	+1.045				.36		19	52	52.69	43
20	04	25.08	+ .646				.37		20	03	06.36	44
20	10	32.84	+ .807	+1	19.72		.37		20	09	14.28	45
20	13	23.30	+ ·996			+1	19.37	+0.37	20	12	04 93	46
19	40	07.08	+ .034	+1	25.09	+1	25.16	+1.20	19	38	41.95	47
19	44	26.70	+ .036	+1	25.20		.17		19	43	01.57	48

Nos. 22, 33, 36, 37. Two stars in the field of the instrument.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 5 cont'd.	β Aquilæ	3.4	+ 6°01′	12.0	33.6	19 48 55.5	17.4	39.0
2		c Sagittarii	5	−28 09	29.0	53.2	19 54 18.0	42.7	7.0
3		τ Aquilæ	5 6	+ 6 50	4.0	25.6	19 57 47.5	19.4	31.0
4		θ Aquilæ	3.4	− 1 18	48.0	9 5	20 04 31.2	53.0	14.5
*5		α^2 Capricorni	3	−13 02	54.4	16.5	20 10 39.0	1.4	23.5
*6		β^2 Capricorni	3	−15 17	45.0	7.2	20 13 29.9	52.6	14.7
7		π Capricorni	5	−18 44	52.3	15.3	20 19 38.3	1.3	24.3
8		i Cygni	4.5	+29 50	29.6	54.3	20 24 19.3	44.3	9.1
9		η Delphini	6	+12 29	7.2	29.0	20 27 51.2	13.5	35.3
10		υ Capricorni	5	−18 42	39.7	2.3	20 32 25.3	48.3	11.0
11		δ Delphini	5	+14 30	43.0	5.0	20 37 27.5	50 0	12.0
12		α Microscopi	5	−34 22	35.0	1.0	20 41 27.4	53.8	20.0
13		Moon I	(10.2)	−19 46	20.5	43.6	20 44 07.4	31.2	54.3
14		g Vulpeculæ	5	+27 27	24.0	48.1	20 49 12.6	37.2	1.3
*15		x Vulpeculæ	5.6	+21 43	49.0	11.8	20 52 35.3	58.8	21.7
16		η Capricorni	5	−20 29	0.7	23.7	20 56 46.8	9.9	32.9
17		ν Aquarii	5	−12 01	37 5	59.5	21 02 21.8	44.0	5.8
18		s Capricorni	6	−15 50	37.6	0.0	21 08 22.5	46.0	7.3
19	6	α Microscopi	5	−34 22	36.2	2.2	20 41 28.5	54.9	21.0
20		5 Aquarii	6	− 6 06	27.6	49.2	20 45 11.0	32.8	54.4
21		g Vulpeculæ	4.5	+27 27	25.3	49.5	20 49 14.0	38.6	2.9
22		x Vulpeculæ	5.6	+21 43	50.3	13.5	20 52 37.0	0.5	23.5
23		η Capricorni	5	−20 29	1.7	24.8	20 56 48.0	11.2	34.1
24		ν Aquarii	5	−12 01	38.7	0.5	21 02 22.7	45.0	6.9
25		3 Piscis Aus.	6	−28 16	29.0	53.5	21 05 18.2	43.0	7.4
26		s Capricorni	5.6	−15 50	38.3	0.7	21 08 23.3	46.0	8.5
27		ι Capricorni	5	−17 31	5.0	27.3	21 14 50.2	13.1	35.5
*28		21 Aquarii	6	− 4 14	43.0	4.6	21 18 26.3	48.0	9.5
29		ε Capricorni	5	−20 11	51.4	14.2	21 29 37.2	0.2	23.0
30		γ Capricorni	4	−17 23	58.2	21.0	21 32 43.8	6.6	29.4
31		Moon I	(11.3)	−14 45	31.6	54.4	21 35 17.5	40.5	3.5
32		δ Capricorni	3.4	−16 51	57.0	19.3	21 39 42.3	5.3	27.6
33		μ Capricorni	5	−14 18	19.8	42.0	21 46 04.3	26.6	48.8
34		17 Pegasi	6	+11 20	54.2	16.0	21 50 38.2	0.5	22.3
35		20 Pegasi	5.6	+12 22	3.6	25.6	21 54 48.0	10.3	32.3
36		ι Aquarii	4.5	−14 38	33.2	55.5	21 59 18.0	40.4	2.6
37		α Pegasi	2	+14 21	33.5	55.8	22 58 18.3	40.8	3.0
38	7	s Capricorni	5.6	−15 50	40.2	2.5	21 08 25.1	47.7	9.9
39		ι Capricorni	5	−17 31	6.7	29.0	21 14 51.8	14.7	37.0
40		β Aquarii	3	− 6 16	56.3	18.0	21 24 39.8	1.6	23.3
41		δ Capricorni	3.4	−16 51	59.2	21 4	21 39 44.2	7.0	29.3
42		μ Capricorni	5	−14 18	21.7	43.5	21 46 06.1	28.6	50.5
43		17 Pegasi	6	+11 20	56.0	17.8	21 50 39.9	2.1	24.0
44		20 Pegasi	5.6	+12 22	5.2	27.0	21 54 49.2	11.5	33.3
45		ι Aquarii	4.5	−14 38	35.0	57.0	21 59 19.5	41.9	4.0
46		37 Aquarii	6.7	−11 36	47.5	9.2	22 03 31.5	53.8	15.5
47		F Aquarii	6	−21 52	13.3	36.2	22 06 59.7	23.2	46.3
48		D Aquarii	6	−14 06	13.0	35.0	22 11 57.5	20 0	42.0
49		49 Aquarii	6	−29 34	20.0	43.7	22 16 07.8	32.0	55.6
50		H^1 Pegasi	5.6	+ 3 35	17.5	39.0	22 20 00.8	22.6	44.3
51		Moon I	(12.3)	− 9 15	40.9	3.2	22 24 25.7	48.2	10.6

October 5.—x Vulpeculæ is recorded 20*h*. 53*m*. at transit over middle wire.

6.—☽ ☌ d^3 Capricorni, and a star of the 7th magnitude not in A. S. C.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
19	48	55.50	+ .038	+1	25.28	+1	25.17	+1.20	19	47	30.37	1
19	54	17.98	+ .073				.17		19	52	52.88	2
19	57	47.50	+ .037				.17		19	56	22.37	3
20	04	31.24	+ .045				.18		20	03	06.10	4
20	10	38.96	+ .057	+1	25.10		.18		20	09	13.84	*5
20	13	29.88	+ .059				.19		20	12	04.75	*6
20	19	38.30	+ 062				.19		20	18	13.17	7
20	24	19.32	+ .013				.20		20	22	54.13	8
20	27	51.24	+ .032				.20		20	26	26.07	9
20	32	25.32	+ .062				.20		20	31	00.18	10
20	37	27.50	+ .030				.21		20	36	02.32	11
20	41	27.44	+ .081				.21		20	40	02.31	12
20	44	07.40	+ .063				.21		20	42	42.25	13
20	49	12.64	+ .016				.22		20	47	47.44	14
20	52	35.32	+ .022				.22		20	51	10.12	*15
20	56	46.80	+ .064				.22		20	55	21.64	16
21	02	21.72	+ .055				.23		21	00	56.54	17
21	08	22.48	+ .059			+1	25.23	+1.20	21	06	57.31	18
20	41	28.56	+ .081			+1	26.62	+1.40	20	40	02.02	19
20	45	11.00	+ .043				.62		20	43	44.42	20
20	49	14.06	+ .016				.62		20	47	47.46	21
20	52	36.96	+ .022				.63		20	51	10.35	22
20	56	47.96	+ .064				.63		20	55	21.39	23
21	02	22.76	+ .055				.63		21	00	56.18	24
21	05	18.22	+ .073				.64		21	03	41.65	25
21	08	23.36	+ .059				.64		21	06	56.78	26
21	14	50.22	+ .061				.65		21	13	23.63	27
21	18	26.28	+ .048				.65		21	16	59.68	*28
21	29	37.20	+ .064				.66		21	28	10.60	29
21	32	43.80	+ .061				.66		21	31	17.20	30
21	35	17.50	+ .058				.67		21	33	50.89	31
21	39	42.30	+ .060				.67		21	38	15.69	32
21	46	04.30	+ .057				.68		21	44	37.68	33
21	50	38.24	+ .038				.68		21	49	11.59	34
21	54	47.96	+ .032				.68		21	53	21.31	35
21	59	17.94	+ .057				.69		21	57	51.31	36
22	58	18.28	+ .030	+1	26.75	+1	26.75	+1.40	22	56	51.56	37
21	08	25.08	+ .059			+1	28.10	+1.31	21	06	57.04	38
21	14	51.84	+ .061				.11		21	13	23.79	39
21	24	39.80	+ .043	+1	28.15		.12		21	23	11.72	40
21	39	44.22	+ .060				.13		21	38	16.15	41
21	46	06.08	+ .057				.14		21	44	38 00	42
21	50	39.96	+ .033				.15		21	49	11.84	43
21	54	49.24	+ .032				.15		21	53	21.12	44
21	59	19.48	+ .057				.15		21	57	51.39	45
22	03	31.50	+ .055				.15		22	02	03.40	46
22	06	59.74	+ .065				.15		22	05	31.65	47
22	11	57.50	+ .057				.16		22	10	29.40	48
22	16	07.82	+ .075				.16		22	14	39.73	49
22	20	00.84	+ .040				.17		22	18	32.71	50
22	24	26.72	+ .053			+1	28.17	+1.31	22	22	57.60	51

Nos. 5, 6, 28. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 7 cont'd.	η Aquarii	4	—0°56′	57.0	18.2	22 28 40.0	1.9	23.2
2		ζ Pegasi	3	+10 00	17.0	38.8	22 35 00.9	22.9	44.8
3		τ^2 Aquarii	5	—14 26	54.5	16.8	22 42 39.3	1.8	24.2
4		λ Aquarii	4	— 8 25	4.5	26.2	22 45 48.2	10.2	31.9
5	8	η Aquarii	4	— 0 56	57.9	19.2	22 28 41.1	3 0	24.3
6		ζ Pegasi	3	+10 00	18 0	39.8	72 35 01.9	24.1	46.0
7		ψ^1 Piscis Aus.	7	—26 04	31.0	55.0	22 38 19.0	43.1	7.0
8		τ^2 Aquarii	4.5	—14 26	56.0	18.0	22 42 40.4	2.8	24.8
9		λ Aquarii	4	— 8 25	5.6	27.3	22 45 49 3	11.3	33.1
10		α Piscis Aus.	1	—30 28	31.8	57.0	22 50 21.9	46.8	2.0
11		x^2 Piscium	6	— 0 40	15.8	37.2	22 53 59.0	20.8	42.3
12		α Pegasi	2	+14 21	36.2	58.8	22 58 21.0	43 2	5.7
13		c^2 Aquarii	4.5	—22 02	41.7	4.6	23 02 28.1	51.7	14.6
14		60 Pegasi	6	+25 59	49.0	13.0	23 05 37.1	1.2	25.2
15		61 Pegasi	6	+27 23	42.4	6.7	23 09 31.3	56.0	20.3
16		Moon I	(13.3)	— 3 02	39.0	0.8	23 13 23.2	45.5	7.4
17		b^1 Aquarii	5	—20 58	21.2	44.0	23 16 07.5	31.0	53.8
18		κ^1 Piscium	5.6	+ 0 23	34.0	55.7	23 20 17.3	39.0	0.6
19		13 Piscium	6.7	— 1 59	35.2	56.8	23 25 18.5	40.3	1.8
20		ι Piscium	4.5	+ 4 46	33 6	55.0	23 33 16.9	38.8	0.3
21		λ Piscium	5	+ 0 54	43.2	4.6	23 35 26.3	48.0	9.5
22	9	ι Piscium	4.5	+ 4 46	34.6	56.1	23 33 17.8	39.6	1.1
23		λ Piscium	5	+ 0 54	44.2	5.7	23 35 27.5	49.3	10.8
*24		A^4 Aquarii	6	—19 34	30.6	53.6	23 39 16.7	39.7	2.7
25		79 Pegasi	6	+27 57	19.8	44.0	23 43 08.6	33.2	57.5
26		25 Piscium	6.7	+ 1 12	44.5	6.0	23 46 27.8	49 5	10.8
27		ψ Pegasi	5.6	+24 15	24.0	47.2	23 51 11.2	35.2	58.5
28		q Piscium	5	— 3 55	28.4	50.1	23 55 11.8	33.6	55.3
29		k Pegasi	6	+12 30	20.0	41.6	23 59 03.9	26.2	47.8
30		Moon I	(14.4)	+ 3 34	31.2	53.3	0 03 15.5	37.8	59.9
*31		B Piscium	6	+ 7 56	5.5	57.0	0 08 19.0	41.0	2.5
32		d Piscium	5.6	+ 7 18	13.2	34.8	0 13 56.8	18 8	40.3
33	11	α Ap. Sculp.	5	—30 13	41.7	6.5	0 52 31.7	57.0	21.9
*34		ε Piscium	4	+ 7 02	32.7	54.1	0 56 16.0	38.0	59.5
35		τ Piscium	6	+29 14	40.0	4.5	1 04 29.3	54.2	15.7
36		38 Ceti	6	— 1 50	33.5	55.0	1 08 16.7	38.5	59.9
37		υ Piscium	6	+26 25	30.4	54.5	1 12 18.7	43.0	7.0
*38		θ^1 Ceti	3	— 9 01	55.5	17.2	1 17 39.2	1.2	22.9
39		47 Ceti	6	—13 53	51.0	13.0	1 20 35.4	57.8	20.0
40		η Piscium	4	+14 31	48.7	10.8	1 24 33.3	55.8	17.9
41		101 Piscium	7	+13 50	6.6	28.6	1 28 51.1	13.6	35.6
*42		105 Piscium	6	+15 35	56.2	18.5	1 32 41 0	3.5	25.9
43		τ Ceti	3.4	—16 47	30.6	52.8	1 38 15.7	38.5	0.8
44		193 A. S. C.	6	+21 29	10.0	33.0	1 42 56.4	19.9	42.9
*45		γ Arietis	5	+18 30	37.8	0.1	1 46 23.1	46.2	8.5
46		ι Arietis	6	+17 02	29 6	52.0	1 50 14.7	37.5	59.8
47		Moon II	(16.4)	+16 19	13.6	36.6	1 52 59.7	22.9	45.9
48		60 Ceti	6	— 0 38	54 0	15.3	1 56 37.0	58.8	20.3
49		α Arietis	3	+22 42	1.0	24.0	1 59 47.5	11.1	34.2
50		ι Trianguli	5.6	+29 33	54.4	19.0	2 04 44.0	9.0	33.6

October 9.—A^4 Aquarii is a double star.

9.—B Piscium is double; the space between the stars estimated at 7½s.

11.—γ Arietis consists of two stars of the 5th magnitude.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m	s.	m.	s.	s.	h.	m.	s.	
22	28	40.06	+ .045			+1	28.17	+1.31	22	27	11.93	1
22	35	00.88	+ .034	+1	28.15		.18		22	33	32.73	2
22	42	39.32	+ .057				.18		22	41	11.20	3
22	45	48.20	+ .052			+1	28.19	+1.31	22	44	20.06	4
22	28	41.10	— .205			+1	29.26	+0 90	22	27	11.64	5
22	35	01.96	— .147	+1	29.06		.27		22	33	32.54	6
22	38	19.02	— .323				.27		22	36	49.43	7
22	42	40.40	— .303				.27		22	41	10.83	8
22	45	49.32	— .242				.28		22	44	19.80	9
22	50	21.90	— .347		29.30		.28		22	48	52.27	10
22	53	59.02	— .204				.28		22	52	29.54	11
22	58	20.98	— .138		29.30		.28		22	56	51.56	12
23	02	28.14	— .301				.28		23	00	58.56	13
23	05	37.10	— .079				.28		23	04	07.74	14
23	09	31.84	— .072				.28		23	08	01.99	15
23	13	23.18	— .224				.29		23	11	53 67	16
23	16	07.50	— .297				.29		23	14	37.91	17
23	20	17.32	— .200				.29		23	18	47.83	18
23	25	18.52	— .210				.29		23	23	49.02	19
23	33	16.92	— .182	+1	29.46		.30		23	31	47.44	20
23	35	26.32	— .197			+1	29.30	+0.90	23	33	56.82	21
23	33	17.84	— .182	+1	30.39	+1	30.31	+0.97	23	31	47.35	22
23	35	27.50	— .197				.31		23	33	56.99	23
23	39	16.66	— .289				.31		23	37	46.06	*24
23	43	08.62	— .069				.31		23	41	38.24	25
23	46	27.72	— .196				.31		23	44	57.21	26
23	51	11.22	— .089				.32		23	49	40.81	27
23	55	11.81	— .218				.32		23	53	41.30	28
23	59	03.90	— .146				.32		23	57	33.43	29
0	03	15.54	— .175				.33		0	01	45.04	30
0	08	19.00	— .166				.33		0	06	48.50	*31
0	13	56.78	— .169			+1	30.33	+0.97	0	12	26.28	32
0	52	31.76	— .649			+1	32.94	+1.53	0	50	58.17	33
0	56	16.06	— .319				.94		0	54	42.80	*34
1	04	29.34	— .114				.95		1	02	56.28	35
1	08	16.72	— .392				.95		1	06	43.38	36
1	12	18.72	— .144				.96		1	10	45.62	37
1	17	39.20	— .421	+1	32.89		.96		1	16	05.82	*38
1	20	35.44	— .492				.97		1	19	01.98	39
1	24	33.30	— .256				.97		1	23	00.07	40
1	28	51.10	— .262				.97		1	27	17.87	41
1	32	41.02	— .247				.98		1	31	07.79	*42
1	38	15.68	— .518				.98		1	36	42.18	43
1	42	56.44	— .193				.98		1	41	23.27	44
1	46	23.14	— .220				.98		1	44	49.94	*45
1	50	14.72	— .234				.99		1	48	41.50	46
1	52	59.74	— .240				.99		1	51	26.51	47
1	56	37.08	— .381				.99		1	55	03.71	48
1	59	47.56	— .181	+1	33.08		33.00		1	58	14.38	49
2	04	44.00	— .112			+1	33.00	+1.53	2	04	10.89	50

Nos. 34, 38, 42. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 11	θ^1 Arietis	6	+19°09′	6.0	28.8	2 10 51.8	14.8	37.5
2	cont'd.	69 Ceti	6	— 0 20	39.4	0.6	2 15 22.5	44.4	5.6
3		ρ Ceti	5.6	—13 01	6.5	28.3	2 19 50.9	13.5	35.3
4		ψ Arietis	6.7	+17 00	55.1	17.7	2 23 40.3	3.0	25.5
5	12	ι Trianguli	5.6	+29 33	56.2	20.8	2 04 45.8	10.8	35.5
6		θ^1 Arietis	6	+19 09	7.8	30.3	2 10 53.4	16.5	39.2
7		69 Ceti	6	— 0 20	41.0	2.3	2 15 24.1	45.9	7.3
8		ρ Ceti	5.6	—13 01	8.2	30.3	2 19 52.6	15.0	37.0
9		ψ Arietis	6.7	+17 00	56.7	19.0	2 23 41.8	4.6	27.8
10		e^1 Ceti	6	— 8 34	44.5	6.0	2 28 28.3	50.5	12.0
11		ν Arietis	5.6	+21 16	37.3	0.7	2 31 24.0	47.3	10.5
12		μ Arietis	6	+19 19	15.1	37.7	2 35 01.0	24.3	46.8
13		γ Ceti	3	+ 2 34	56.7	18.4	2 36 40.2	2.0	23.6
14		c Arietis	3.4	+26 33	26.2	50.1	2 42 14.5	39.0	2.9
15		312 A. S. C.	7	+15 50	12.0	34.3	2 45 57.0	19.7	42.1
16		ε Arietis	5	+20 42	57.6	20.8	2 51 44.0		
17		Moon II	(17.5)	+21 37	56.5	20.2	2 52 44.3	8.3	32.0
18		α Ceti	2.3	+ 3 28	51.2	12.8	2 55 34.5	56.3	17.8
19		53 Arietis	6.7	+17 16	20.1	42.5	3 00 05.2	28.0	50.5
20		δ Arietis	4	+19 07	23.0	45.8	3 04 08.8	31.8	54.6
21		ζ Arietis	4.5	+20 27	36.3	59.0	3 07 22.3	45.6	8.3
22		k^2 Ceti	5.6	— 1 31	7.2	28.8	3 11 50.5	12.3	33.9
23		g Arietis	5.6	+24 09	44.5	7.9	3 16 31.7	55.5	19.3
24	13	ε Arietis	5	+20 42	59.3	22.4	2 51 45.6	8.8	32.0
*25		α Ceti	2.3	+ 3 28	53.0	14.3	2 55 36.1	58.0	19.3
26		53 Arietis	6.7	+17 16	21.5	44.0	3 00 06.8	29.6	52.1
27		δ Arietis	4	+19 07	24.8	47.5	3 04 10.4	33.3	56.0
28		ζ Arietis	4.5	+20 27	37.7	0.5	3 07 24.0	47.5	10.4
29		k^2 Ceti	5.6	— 1 31	8.7	30.2	3 11 52.0	13.9	35.3
30		g Arietis	5.6	+24 09	46.0	9.5	3 16 33.5	57.5	21.0
31		ξ Tauri	4	+ 9 11	27.3	49.1	3 20 11.0	33.0	54.8
32		17 Eridani	4.5	— 5 37	38.2	59.7	3 21 21.5	43.4	4.9
33		t^2 Eridani	4	—22 10	37.3	0.5	3 28 24.0	47.5	10.6
34		21 Eridani	6	— 6 08	4.6	26.0	3 32 48.0	10.0	31.4
35		b Pleiadum	4.5	+23 36	17.1	40.5	3 37 04.3	28.1	51.6
36		η Tauri	3	+23 36	53.2	16.5	3 39 40.2	4.0	27.4
*37		426 A. S. C.	5	—38 07	27.5	54.8	3 41 22.5	50.2	17.6
*38		32 Eridani	5	— 3 26	13.3	34.5	3 47 56.3	18.1	39.5
39		γ^1 Eridani	2.3	—13 58	30.3	52.3	3 52 14.7	37.2	59.2
40		Moon II	(18.5)	+25 31	2.6	27.1	3 56 52.0	16 9	41.3
*41		ω^1 Tauri	6	+19 11	46.6	9.2	4 01 32.2	55.3	18.0
42		o Eridani	4.5	— 7 16	0.5	22.2	4 05 44.1	6.0	27.6
43		α Horologii	5	—42 41	24.3	53.5	4 10 23.2	53.0	22.3
44		υ^1 Tauri	5	+22 26	39.0	2.2	4 18 25.7	49.2	12.5
45		k^1 Eridani	5.6	+ 1 01	13.6	35.0	4 21 56.8	8.6	40.0
*46		k^2 Eridani	6	— 0 23	39.3	0.5	4 25 22.2	44 0	5.5
47		α Tauri	1	+16 11	40.5	3.0	4 28 25.7	48.3	10.8
*48		τ Tauri	5	+22 39	33.3	56.7	4 34 20.1	43.5	6.9
49	14	χ Tauri	6	+25 15	46.0	9.7	4 14 33.8	58.0	21.6
50		υ^1 Tauri	5	+22 26	40.5	3.5	4 18 27.0	50.5	13.5

October 13.—☽ ☌ η Tauri.

426 A. S. C. is a double star. 32 Eridani is a double, unequal star--one being estimated of the 5th, and the other of the 7th magnitude.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
2	10	51.76	— .215			+1	33.01	+1.53	2	09	18.56	1
2	15	22.50	— .379				.01		2	13	49.11	2
2	19	50.90	— .484				.02		2	18	17.40	3
2	23	40.32	— .234			+1	33.02	+1.53	2	22	07.07	4
2	04	45.82	— .112			+1	34.62	+1.63	2	03	11.09	5
2	10	53.44	— .215				.62		2	09	18.61	6
2	15	24.12	— .379				.63		2	13	49.11	7
2	19	52.62	— .484				.63		2	18	17.51	8
2	23	41.78	— .234				.64		2	22	06.91	9
2	28	28.26	— .457				.64		2	26	53.16	10
2	31	23.96	— .195				.65		2	29	49.12	11
2	35	00.98	— .213				.65		2	33	26.12	12
2	36	40.18	— .356	+1	34.65		.65		2	35	05.17	13
2	42	14.54	— .143				.66		2	40	39.74	14
2	45	57.02	— .241				.66		2	44	22.12	15
2	51	43.99	— .200				.66		2	50	09.13	16
2	52	44.26	— .194				.66		2	51	09.41	17
2	55	34.52	— .348	+1	34.67		.67		2	53	59.50	18
3	00	05.26	— .233				.67		2	58	30.36	19
3	04	08.80	— .216				.68		3	02	33.90	20
3	07	22.30	— .202				.68		3	05	47.42	21
3	11	50.54	— .389				.69		3	10	15.46	22
3	16	31.78	— .167			+1	34.69	+1.63	3	14	56.92	23
2	51	45.62	— .200			+1	36.34	+1.66	2	50	09.08	24
2	55	36.14	— .348	+1	36.28		.35		2	53	59.44	*25
3	00	06.80	— .233				.36		2	58	30.21	26
3	04	10.40	— .216				.36		3	02	33.82	27
3	07	24.02	— .302				.37		3	05	47.35	28
3	11	52.02	— .389				.37		3	10	15.26	29
3	16	33.50	— .167				.37		3	14	56.96	30
3	20	11.04	— .311				.38		3	18	34.35	31
3	24	21.54	— .212				.39		3	22	44.94	32
3	28	23.98	— .567				.39		3	26	47.02	33
3	32	48.00	— .427				.40		3	31	11.17	34
3	37	04.32	— .173				.40		3	35	27.75	35
3	39	40.26	— .173		36.51		.40		3	38	03.69	36
3	44	22.52	— .743				.41		3	42	45.37	*37
3	47	56.34	— .405				.41		3	46	19.53	*38
3	52	14.74	— .493		36.41		.42		3	50	37.83	39
3	56	51.98	— .154				.42		3	55	15.41	40
4	01	32.26	— .214				.42		3	59	55.63	*41
4	05	44.08	— .436				.43		4	04	07.21	42
4	10	23.26	— .807				.43		4	08	46.02	43
4	18	25.72	— .183				.44		4	16	49.10	44
4	21	56 80	— .368				.45		4	20	19.98	45
4	25	22.30	— .379				.45		4	23	45.47	*46
4	28	25.66	— .239	+1	36.46		.46		4	26	48.96	47
4	34	20.10	— .182			+1	36.46	+1.66	4	32	43.46	*48
4	14	33.82	— .102			+1	36.11	+1.48	4	12	55.61	49
4	18	27.00	— .120				.11		4	16	48.77	50

Nos. 25, 41, 48. Two stars in the field of the instrument.
46. Recorded 4*h.* 24*m.* at transit over III wire.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 14 cont'd.	k^1 Eridani	6	+ 1°01′	15.0	36.3	4 21 58.1	20.0	41.5
2		k^2 Eridani	5.6	— 0 23	40.7	2.0	4 25 24.0	46.0	7.3
3		α Tauri	1	+16 11	42.2	4.4	4 28 27.3	50.1	12.3
*4		τ Tauri	5	+22 39	34.6	58.0	4 34 21.6	45.1	8.4
5		β Cœli Sculp.	5	—37 28	12.0	39.0	4 38 06.5	34.0	1.0
*6		K Tauri	6	+15 37	33.9	55.2	4 42 17.8	40.4	2.5
7		ω Eridani	5	— 5 43	1.0	22.5	4 46 44.2	6.0	27.5
8		63 Eridani	5	—10 30	14.5	36.0	4 53 58.2	20.4	42.0
9		Moon II	(19.5)	+27 35	20.0	44.9	5 04 10.2	35.5	0.4
10		β Orionis	1	— 8 23	49.5	11.0	5 08 33.0	55.0	16.5
11		21 Orionis	6	+ 2 26	49.6	11.0	5 12 32.8	54.5	16.0
*12		o Orionis	5.6	— 0 33	34.7	56.2	5 15 18.0	39.7	1.2
13		β Tauri	2	+28 28	4.6	29.0	5 17 53.7	18.4	42.8
14		β Leporis	4	—20 53	19.2	42.0	5 23 05.4	28.8	51.6
15		δ Orionis	2	— 0 25	49.0	10.4	5 25 32.1	53.8	15.2
16		l Aurigæ	5	+30 24			5 30	30.2	55.3
17		α Columbæ	2	—34 10	40.8	7.0	5 35 33.3	59.6	25.8
18	15	o Orionis	5.6	— 0 33	36.2	57.5	5 15 19.2	41.0	2.4
19		β Tauri	2	+28 29	6.0	30.2	5 17 55.0	19.9	44.2
20		β Leporis	4	—20 53	20.8	43.4	5 23 06.8	30.2	52.8
*21		δ Orionis	2	— 0 25	50.2	11.6	5 25 33.4	55.2	16.6
22		l Aurigæ	6	+30 24	16.1	40.8	5 30 06.1	31.4	56.2
23		α Columbæ	2	—34 10	42.8	8.5	5 35 34.8	1.2	27.0
24		O Tauri	6	+14 25	5.8	27.8	5 39 50.8	12.8	34.8
25		C Tauri	5	+27 34	12.0	36.2	5 45 00.7	25.3	49.6
26		α Orionis	1	+ 7 22	30.6	52.2	5 48 14.2	36.2	57.8
*27		59 Orionis	6	+ 1 49	6.8	27.8	5 51 49.6	11.3	32.8
28		3 Monocerotis	5.6	—10 36	18.0	40.0	5 56 02.2	24.4	46.3
29		ν Orionis	4.5	+14 47	25.0	47.2	6 00 09.9	32.5	54.8
30		θ Columbæ	5	—37 14	51.0	18.1	6 03 45.5	13.0	40.1
*31		f^2 Orionis	6	+16 11	10.5	33.0	6 07 55.6	18.2	40.6
32		Moon II	(20.6)	+27 35	19.4	44.2	6 12 09 3	34.5	59.4
33		μ Geminorum	3	+22 35	14.5	37.5	6 15 01.0	24.5	47.5
34		z Aurigæ	6	+30 35	11.0	36.0	6 20 01.3	26.6	51.5
*35		D^1 Canis Maj.	5	—32 29	6.2	31.5	6 23 57.4	23.2	48.3
36		g Monocerotis	6.7	+ 7 41	6.6	28.0	6 27 50.1	12.2	33.7
37		ν^3 Canis Maj.	5.6	—18 06	49.0	11.3	6 32 34.3	57.4	19.8
38		ε Geminorum	3	+25 17	1.4	25.0	6 35 49.1	13.2	36.8
39	31	π Sagittarii	4.5	—21 16	29.1	52.0	19 00 15.3	38.7	1.6
40		δ Aquilæ	3.4	+ 2 48			19 17 25.8		
*41		β^1 Cygni	3	+27 38	26.3	50.5	19 24 15.0	39.6	3.8
42		Moon I	(6.5)	—24 38	31.4	56.0	19 30 20.6	45.2	9.7
43		γ Aquilæ	3	+10 14	55.0	16.8	19 38 38.9	1.0	22.9
44		β Aquilæ	3.4	+ 6 01	43.7	5.3	19 47 27.1	49.0	10.5
45		c Sagittarii	4.5	—28 09	0.7	25.2	19 52 49 9	14.5	39.0
46	Nov. 1	β Aquilæ	3.4	+ 6 01	44.2	5.6	19 47 27.5	49.4	11.0
47		c Sagittarii	4.5	—28 09	1.2	25.7	19 52 50.4	15.0	39.5
48		i Vulpeculæ	5.6	+23 09	14.0	37.2	20 00 01.0	24.7	48.0
*49		19 Vulpeculæ	6	+26 20	18.5	42.4	20 05 06.7	31.1	56.0
*50		α^2 Capricorni	3	—13 02	27.3	49.1	20 09 11.5	33.9	55.7

October 14.—Observation interrupted by clouds.
17.—Set the chronometer back two minutes.
31.—Rapidly passing cumuli.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
4	21	58.18	— .293			+1	38.12	+1.48	4	20	19.77	1
4	25	24.00	— .247	+1	38.12		.12		4	23	45.63	2
4	28	27.26	— .157				.13		4	26	48.97	3
4	34	21.54	— .118				.13		4	32	43.29	*4
4	38	06.50	— .477				.14		4	36	27.88	5
4	42	17.78	— .160				.14		4	40	39.48	*6
4	46	44.24.	— .275				.15		4	45	05.82	7
4	53	58.22	— .301				.15		4	52	19.77	8
5	04	10 20	— .086				.16		5	02	31.95	9
5	08	33.00	— .289		38.05		.17		5	06	54.54	10
5	12	32.78	— .232				.17		5	10	54.38	11
5	15	17.96	— .245				.17		5	13	39.56	*12
5	17	53.70	— .080		38.24		.18		5	16	15.44	13
5	23	05.40	— .361				.18		5	21	26.86	14
5	25	32.10	— .247		37.99		.18		5	23	53.67	15
5	30	05.04	— .067				.19		5	28	26.78	16
5	35	33.30	— .451	+1	38.43	+1	38.19	+1.48	5	33	54.66	17
5	15	19.26	— .483			+1	39.46	+1.30	5	13	39.32	18
5	17	55.06	— .156	+1	39.49		.46		5	16	15.44	19
5	23	06.80	— .703				.46		5	21	26.64	20
5	25	33.40	— .482		39.14		.46		5	23	53.46	*21
5	30	06.12	— .130				.47		5	28	26.52	22
5	35	34.86	— .879		39.52		.47		5	33	54.51	23
5	39	50.30	— .325				.48		5	38	10.50	24
5	45	00.76	— .168				.48		5	43	21.11	25
5	48	14.20	— .401		39.34		.48		5	46	34.32	26
5	51	49.56	— .458				.49		5	50	09.61	*27
5	56	02.18	— .587				.49		5	54	22.10	28
6	00	09.88	— .321				.49		5	58	30.07	29
6	03	45.54	— .926				.50		6	02	05.11	30
6	07	55.58	— .306				.50		6	06	15 77	*31
6	12	09.36	— .168				.50		6	10	29.69	32
6	15	01.00	— .231	+1	39.92		.51		6	13	21.26	33
6	20	01.28	— .128				.51		6	18	21.64	34
6	23	57.32	— .853				.51		6	22	16 96	*35
6	27	50 12	— .397				.52		6	26	10.20	36
6	32	34.36	— .670				.52		6	30	54.17	37
6	35	49.10	— .198			+1	39.52	+1.30	6	34	09.38	38
19	00	15.34				—0	02.65	+0.30	19	00	17.99	39
19	17	25.80		—0	02.55		.65		19	17	28.45	40
19	24	15.04					.65		19	24	17.69	*41
19	30	20.58					.65		19	30	23.23	42
19	38	38.92			02.68		.65		19	38	41.57	43
19	47	27.12		—0	02.73		.66		19	47	29.78	44
19	52	49.86				—0	02.66	+0.30	19	52	52.52	45
19	47	27.54	— .181	—0	02.47	—0	02.36	+1.02	19	47	29.72	46
19	52	50 36	— .376				.36		19	52	52.34	47
20	00	00.98	— .106				.37		20	00	03.24	48
20	05	06.74	— .087				.37		20	05	09.02	*49
20	09	11.50	— .257	—0	02.27	—0	02.37	+1.02	20	09	13.61	*50

Nos. 4, 6, 12, 21, 27, 31, 35, 41, 49, 50. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	Nov. 1 cont'd.	β² Capricorni	3	—15°17′	17.6	39.9	20 12 02.3	24.7	47.0
2		π Capricorni	5	—18 44	25.2	48.0	20 18 10.9	33.8	56.6
3		Moon I	(7.6)	—21 17	11.0	34.6	20 21 58.6	22.7	46.2
4		η Delphini	6	+12 29	39.2	1.2	20 26 23.5	45.8	7.8
5		υ Capricorni	5	—18 42	12.0	34.7	20 30 57.6	20.6	43.3
6	2	π Capricorni	5	—18 44	26.9	49.3	20 18 12.3	35.4	58 0
7		η Delphini	6	+12 29	41.0	2.9	20 26 25.2	47.5	9.4
8		υ Capricorni	5	—18 42	13.6	36.4	20 30 59.2	22.1	49.9
*9		δ Delphini	5	+14 30	17.0	39.1	20 36 01.6	24.1	46.1
10		α Microscopi	4.5	—34 22	9.2	35.2	20 40 01.6	28.0	54.0
11		μ Aquarii	5	— 9 35	20.5	42.2	20 44 04.2	26.3	48.0
*12		q Vulpeculæ	4.5	+27 27	58.0	22.0	20 47 46.5	11.0	36.0
13		21 Capricorni	6	—18 09	9.0	31.5	20 51 54.3	17.2	39.7
14		ζ Cygni	3	+29 34			21 06 10.0	35.0	59.5
15		Moon I	(8.6)	—16 56	0.6	23.6	21 11 46.8	10.0	32.9
16		A Aquarii	6	—13 34	45.5	7.5	21 15 30.0	52.4	14.4
17		b Capricorni	5.6	—22 30	52.3	15.5	21 19 39.1	2.6	25.9
18		β Aquarii	3	— 6 16	27.8	49.2	21 23 11.1	33.0	54.4
19		ε Capricorni	5.6	—20 11	24.3	47.2	21 28 10.4	33.6	56.5
20		γ Capricorni	4	—17 23	31.3	53.8	21 31 16.8	39.8	2.3
21		ε Pegasi	3	+ 9 09	38.8	0.5	21 36 22.6	44.6	6.3
22		δ Capricorni	3.4	—16 51	30.6	53.0	21 38 15.5	38.1	0.6
23		μ Capricorni	5	—14 18	52.9	15.0	21 44 37.5	0.0	22.0
24	3	b Capricorni	5.6	—22 30	53.9	17.2	21 19 40.7	4.2	27.5
25		β Aquarii	3	— 6 16	29.1	50.5	21 23 12.4	34.4	55.9
26		ε Capricorni	5.6	—20 11	26.0	48.6	21 28 11.8	35.0	57.6
27		γ Capricorni	4	—17 23	32.9	55.2	21 31 18.0	40.8	3.2
28		ε Pegasi	3	+ 9 09	40.3	2.0	21 36 24.1	46.2	7.8
29		δ Capricorni	3.4	—16 51	32.0	54.0	21 38 17.1	40.2	2.2
30		μ Capricorni	5	—14 18	54.5	16.6	21 44 39.1	1.6	23.6
31		17 Pegasi	6	+11 20	28.6	50.5	21 49 12.6	34 6	56.6
32		Moon I	(9.6)	—11 45	28.0	50.6	22 00 13.1	35.7	58 3
33		θ Aquarii	4.5	— 8 34	44.5	6.1	22 08 28.2	50.3	11.8
34		30 Pegasi	5	+ 4 59	46.0	7.6	22 12 29.4	51.2	12.7
35		π Aquarii	5	+ 0 34	28.0	49.5	22 17 11.2	33.0	54.5
36		σ Aquarii	5	—11 29	31.6	53.6	22 22 15.8	38.0	50.0
37		α Piscis Aus.	1	—30 28	3.5	23.4	22 48 53.4	18.5	43.5
38		α Pegasi	2	+14 21	8.2	30.3	22 56 52.6	15.0	37.0
39	4	α Aquarii	3	— 1 05	57.2	18.6	21 57 40.3	2.1	23.5
40		37 Aquarii	7	—11 36	22.0	44.0	22 02 06.0	28.0	60.0
41		θ Aquarii	4.5	— 8 34	46.3	8.0	22 08 30.0	52.0	13.7
42		30 Pegasi	5	+ 4 59	47.6	39.2	22 12 31.1	53 0	14.6
43		π Aquarii	5	+ 0 34	29.7	51.2	22 17 12.9	34.6	56.0
44		σ Aquarii	5	—11 29	33.3	55.2	22 22 17.4	39.6	1.5
45		ν Aquarii	5	—21 31	16.6	39.5	22 26 03.0	26.5	49.5
46		κ Aquarii	6	— 5 03	51.6	13.0	22 29 34.9	56.8	18.3
47		ζ Pegasi	3	+10 00	51.8	13.6	22 33 35.7	57.8	19.6
48		45 Pegasi	6	+18 32	2.2	25.0	22 37 48.0	11.0	33.7
49		μ Pegasi	4	+23 45	36.2	59.8	22 42 23.7	47.6	11.1
50		Moon I	(10.7)	— 5 54	24.0	46.0	22 48 08.4	30.8	52.9

November 2.—☽ ☌ ι Capricorni. δ Delphini at transit over middle wire is recorded 20h. 35s.
3.—☽ ☌ ε Aquarii.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
20	12	02.30	— .302			—0	02.38	+1.02	20	12	04.38	*1
20	18	10.90	— .311				.38		20	18	12.97	2
20	21	58.62	— .335				.38		20	22	00.67	3
20	26	23.50	— .164				.39		20	26	25.73	4
20	30	57.64	— .311			—0	02.39	+1.02	20	30	59.72	5
20	18	12.38	— .311			—0	00.44	+1.61	20	18	12.51	6
20	26	25.20	— .164				.45		20	26	25.49	7
20	30	59.24	— .311				.45		20	30	59.38	8
20	36	01.58	— .154				.46		20	36	01.89	*9
20	40	01.60	— .418				.46		20	40	01.64	10
20	44	04.24	— .273				.47		20	44	04.44	11
20	47	46.50	— .080				.47		20	47	46.89	*12
20	51	54.34	— .318				.48		20	51	54.50	13
21	06	09.86	— .067	—0	00.51		.49		21	06	10.28	14
21	11	46.78	— .311				.49		21	11	46.96	15
21	15	29.96	— .293				.50		21	15	30.17	16
21	19	39.08	— .342				.50		21	19	39.24	17
21	23	11.10	— .257		00.51		.51		21	23	11.35	18
21	28	10.40	— .329				.51		21	28	10.58	19
21	31	16 80	— .313				.52		21	31	17.01	20
21	36	22.56	— .180	—0	00.52		.52		21	36	22.90	21
21	38	15.56	— .312				.53		21	38	15.78	22
21	44	37.48	— .301			—0	00.53	+1.61	21	44	37.71	23
21	19	40.70				+0	01.21	+1.78	21	19	39.49	24
21	23	12.46		+0	01.12		.21		21	23	11.25	25
21	28	11.80					.22		21	28	10.58	26
21	31	18.02					.22		21	31	16.80	27
21	36	24.08			01.20		.23		21	36	22.85	28
21	38	17.10					.23		21	38	15.87	29
21	44	39.08					.24		21	44	37.84	30
21	49	12.58					.24		21	49	11.34	31
22	00	13.14					.26		22	00	11.88	32
22	08	28.18					.26		22	08	26.92	33
22	12	29.38					.27		22	12	28.11	34
22	17	11.24					.27		22	17	09.97	35
22	22	15.80					.28		22	22	14.52	36
22	48	53.46			01.49		.31		22	48	52.15	37
22	56	52.62		+0	01.29	+0	01.32	+1.78	22	56	51.30	38
21	57	40.34	+ .327	+0	03.33	+0	03.36	+1.62	21	57	37.31	39
22	02	06.00	+ .401				.37		22	02	03.03	40
22	08	30.00	+ .380				.37		22	08	27.01	41
22	12	31.10	+ .286				.38		22	12	28.01	42
22	17	12.88	+ .316				.38		22	17	09.82	43
22	22	17.40	+ .401				.39		22	22	14.41	44
22	26	03.02	+ .477				.39		22	26	00.11	45
22	29	34.92	+ .355	+0	03.46		.40		22	29	31.88	46
22	33	35.70	+ .250				.40		22	33	32.65	47
22	37	47.98	+ .187				.41		22	37	44.76	48
22	42	23.68	+ .145				.41		22	42	20.41	49
22	48	08.40	+ .362			+0	03.42	+1.62	22	48	05.34	50

Nos. 1, 12. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 4	x^2 Piscium	6	— 0°40′	49.3	10.6	22 52 32.3	54.1	15.5
2	cont'd.	α Pegasi	2	+14 21	9.9	32.2	22 56 54.6	17.0	39.3
3		c^2 Aquarii	4.5	—22 02	15.0	38.2	23 01 01.6	25.0	48.2
4		60 Pegasi	6	+25 59	22.5	46.2	23 04 10.4	34.6	58.2
5		γ Piscium	4.5	+ 2 25	16.0	37.5	23 08 59.4	21.2	42.6
6	5	μ Pegasi	4	+23 46	38.0	1.2	22 42 25.2	49.2	12.5
7		α Piscis Aus.	1	—30 28	7.0	31.7	22 48 57.1	22.5	47.2
8		x^2 Piscium	6	— 0 40	50.8	12.3	22 52 34.1	56.0	17.4
9		α Pegasi	2	+14 21	11.5	33.6	22 56 56.0	18.5	40.5
10		c^2 Aquarii	4.5	—22 02	16.5	39.7	23 01 03.4	27.0	50.3
11		60 Pegasi	6	+25 59	24 0	47.8	23 04 11.9	36.0	59.7
12		γ Piscium	4.5	+ 2 25	17.6	39.0	23 09 00.8	22.6	44.0
13		τ Pegasi	5.6	+22 52	5.0	28.2	23 12 51.7	15.2	38.5
14		υ Pegasi	5	+22 32	45.8	9 0	23 17 32.5	56.0	19.2
15		y Pegasi	5	+21 37	49.7	12.7	23 25 36.2	59.7	22.7
16		ι Piscium	4.5	+ 4 46	8.8	30.2	23 31 52.0	13.8	35.2
17		λ Piscium	5	+ 0 54	18.7	40.1	23 34 01.8	23.5	44.9
18		Moon I	(11.7)	+ 0 25	54.6	16.2	23 36 38.5	0 8	22.4
19		n Piscium	5.6	— 3 39	8 3	29.6	23 39 51.5	13.4	34.8
20		22 Piscium	6	+ 2 02	12 0	33.4	23 43 55.2	17.0	38.5
21		ω Piscium	4.5	+ 5 59	31.2	52 6	23 51 14.6	36.5	58.0
22	6	ι Piscium	4.5	+ 4 46	9.7	31.2	23 31 53.1	15.0	36.5
23		λ Piscium	5	+ 0 54	19.6	41.0	23 34 02.8	24 5	46.0
24		n Piscium	5.6	— 3 39	9.5	31.0	23 39 52.9	14.8	36.3
25		22 Piscium	6	+ 2 02	13.0	34.5	23 43 56.3	18.1	39.7
26		26 Piscium	6	+ 6 11	23.5	45.0	23 47 06.7	28.5	50.0
27		ω Piscium	4.5	+ 5 59	32.3	53.8	23 51 15.6	37.4	58.8
28		g Ceti	4	—18 13	57.2	19.6	23 55 42.6	5.6	28.0
29		α Andromedæ	1	+28 13	28.2	52.5	0 00 17.3	42.1	6.5
30		γ Pegasi	2.3	+14 18	25.5	47.6	0 05 10.0	32.5	54.5
31		ι Ceti	4	— 9 43	42.7	4.5	0 11 26.7	48.9	10.6
32		9 Ceti	6	—13 06	5.6	27.6	0 14 49.9	12.3	34.3
33		α Phœnicis	2	—43 10	33 6	3.0	0 18 32.8	2.6	32.0
34		38 A. S. C.	6	—24 40	45 6	9.0	0 22 32.4	56 8	20.2
35		Moon I	(12.7)	+ 6 55	16.3	38.6	0 27 00.8	23.1	45.4
36		δ Andromedæ	3	+29 59	7.0	31.8	0 30 57.0	22.2	46.8
37		β Ceti	2.3	—18 52	58.1	20.9	0 35 43.8	6.8	29.6
38		δ Piscium	5	+ 6 43	49.9	11.5	0 40 33.3	55.1	16.6
39		m Ceti	5	— 2 01	17.0	38.5	0 45 00.2	22.0	43.4
40		η Andromedæ	5	+22 33	3.6	27.0	0 48 50.6	14.2	37.5
41		101 A. S. C.	6.7	+ 5 37	59.1	20.6	0 51 42.4	4.4	26.0
42		ε Piscium	4	+ 7 02	5.1	21.6	0 54 48.7	10.7	32.3
43	9	ν Arietis	5.6	+21 16	16.5	39.5	2 30 03.0	26.5	49.5
44		γ Ceti	3	+ 2 34	36.1	57.6	2 35 19.3	41.1	2.5
45		40 Arietis	6	+17 37	7.8	30.3	2 39 53.1	16.0	38.5
46		τ^2 Eridani	5	—21 40	19.0	42.0	2 44 05.5	29.0	52.0
47		ρ^3 Arietis	6	+17 23	58.2	20.8	2 47 43.5	6.3	28.8
48		ε Arietis	5	+20 42	37.0	59.8	2 50 23.1	46.5	39.3
49		α Ceti	2.3	+ 3 28	30 6	52.1	2 54 13.8	35.6	57.0
50		53 Arietis	6	+17 15	59.2	21.5	2 58 44.3	7.1	29.5

November 9.—☽ ☌ *e* and *c* Pleiadum.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	52	32.36	+ .325			+0	03.42	+1.62	22	52	29.26	1
22	56	54.60	+ .219	+0	03.40		.43		22	56	51.39	2
23	01	01.60	+ .480				.43		23	00	58.65	3
23	04	10.38	+ .126				.44		23	04	07.07	4
23	08	59.34	+ .303			+0	03.44	+1.62	23	08	56.20	5
22	42	25.22	— .142			+0	04.56	+1.00	22	42	20.52	6
22	48	57.10	— .543	+0	04`62		.56		22	48	52.00	7
22	52	34.12	— .319				.56		22	52	29.24	8
22	56	56.02	— .215		04.50		.56		22	56	51.25	9
23	01	03.38	— .476				.57		23	00	58.33	10
23	04	11.88	— .124				.57		23	04	07.19	11
23	09	00.80	— .297				.57		23	08	55.93	12
23	12	51.72	— .150				.57		23	12	47.00	13
23	17	32.50	— .149				.58		23	17	27.77	14
23	25	36.20	— .159				.58		23	25	31.46	15
23	31	52.00	— .281	+0	04.58		.58		23	31	47.14	16
23	34	01.80	— .307				.59		23	33	56.90	17
23	36	38.50	— .311				.59		23	36	33.60	18
23	39	51.52	— .339				.59		23	39	46.59	19
23	43	55.22	— .301				.60		23	43	50.32	20
23	51	14.58	— .273			+0	04.60	+1.00	23	51	09.71	21
23	31	53.10	— .451	+0	05.52	+0	05.48	+1.33	23	31	47.17	22
23	34	02.78	— .490				.48		23	33	56.81	23
23	39	52.90	— .542				.49		23	39	46.87	24
23	43	56.32	— .480				.49		23	43	50.35	25
23	47	06.74	— .435				.49		23	47	00.82	26
23	51	15.58	— .437				.50		23	51	09.64	27
23	55	42.60	— .707				.50		23	55	36 39	28
0	00	17.32	— .168		05.53		.50		0	00	11.65	29
0	05	10.02	— .344		05.47		.51		0	05	04.17	30
0	11	26.68	— .610				.51		0	11	20.56	31
0	14	49.94	— .646				.51		0	14	43.78	32
0	18	32.80	—1.086				.52		0	18	26.19	33
0	22	32.80	— .789				.52		0	22	26.49	34
0	27	00.84	— .425				.52		0	26	54.90	35
0	30	56.96	— .142				.53		0	30	51.29	36
0	35	43.84	— .714	+0	05.52		.53		0	35	37.60	37
0	40	33.28	— .428				.53		0	40	27.32	38
0	45	00.22	— .524				.54		0	44	54.16	39
0	48	50.58	— .235				.54		0	48	44.81	40
0	51	42.50	— .441				.54		0	51	36.52	41
0	54	48.68	— .426			+0	05.54	+1.33	0	54	42.71	42
2	30	03.00	— .108			+0	13.65	+2 03	2	29	49.24	43
2	35	19.32	— .198	+0	13.63		.65		2	35	05.47	44
2	39	53.14	— .124				.66		2	39	39.36	45
2	44	05.50	— .312				.66		2	43	51.53	46
2	47	43.52	— .123				.67		2	47	29.73	47
2	50	23.14	— .106				.68		2	50	09.35	48
2	54	13.82	— .193	+0	13.77		.68		2	53	59.95	49
2	58	44.32	— .125			+0	13.69	+2.03	2	58	30.51	50

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s
*1	Nov. 9	δ Arietis	4	+19°07′	2.0	25.0	3 02 48.0	11.0	34.0
2	cont'd.	ζ Arietis	5	+20 27	15.5	38.5	3 06 01.8	25.0	48.0
3		k^2 Ceti	5.6	— 1 31	46.8	8.1	3 10 29.8	51.7	13.0
4		g Arietis	6	+24 09	23.5	47.3	3 15 11.0	34.8	58.8
5		ξ Tauri	4	+ 9 10	5.0	26.8	3 18 48.9	11.0	32.8
6		Moon II	(15.8)	+23 48	2.1	26.4	3 24 50.8	15.2	39.5
7		F Eridani	6	—18 00	33.3	55.5	3 29 18.6	41.6	4.0
*8		b Pleiadum	4.5	+23 36	54.9	18.4	3 35 42.1	5.8	29.3
*9		η Tauri	3	+23 36	30.8	54.1	3 38 17.9	41.7	5.0
*10		426 A. S. C.		—38 07	5.6	33.0	3 43 00.5	28.0	55.5
11		i Eridani	5.6	—35 12	59.0	25.5	3 47 52.0	18.6	45.0
12		λ Tauri	4	+12 02	24.0	46.0	3 52 08.2	30.4	52.3
13		A^1 Tauri	5	+21 38	47.1	10.2	3 55 33.6	57.0	20.2
14	10	g Pleiadum	5.6	+23 47	52.7	15.1	3 35 39.0	3.8	
15		b Pleiadum	4.5	+23 36	56.6	20.2	3 35 43.8	7.6	30.9
16		η Tauri	3	+23 36	32.6	56.1	3 38 19.8	43.5	7.0
*17		426 A. S. C.		—38 07	7.3	34.7	3 43 02.4	30.1	57.5
18		i Eridani	5.6	—35 12	0.6	27.2	3 47 53.8	20.5	46.9
19		γ^1 Eridani	2.3	—13 58	9.7	31.8	3 50 54.3	16.7	38.8
*20		A^1 Tauri	5	+21 38	49.1	12.0	3 55 35.5	59.0	21.9
21		A Eridani	6	—28 06	33.0	57.5	3 59 22.2	47.0	11.4
22		e Eridani	4.5	— 7 16	40.2	1.9	4 04 23.9	45.8	7.5
23		d Eridani	5	— 7 54	31.0	52.8	4 08 14.8	36.8	58.5
24		χ Tauri	6	+25 15			4 13 12.1		
25		υ^1 Tauri	5	+22 27	18.5	41.8	4 17 05.4	28.9	52.3
26		k^1 Eridani	6	+ 1 01	53.2	14.8	4 20 36.7	58.6	19.7
27		k^2 Eridani	5.6	— 0 23	19.0	40.4	4 24 02.1	23.9	45.4
28		α Tauri	1	+16 11	20.5	42.7	4 27 05.3	27.9	50.1
29		Moon II	(16.8)	+26 47	11.6	36.5	4 33 01.6	26.7	51.6
30		β Cœli Sculp.	5	—37 28	50.2	17.0	4 36 44.4	11.8	38.7
31		58 Eridani	6	—17 14	0.5	23.0	4 40 45.5	8.0	30.5
32		ω Eridani	5	— 5 43	39.1	0.5	4 45 22.5	44.5	5.9
*33		s Orionis	5.6	+ 1 28	52.9	14.3	4 50 36.0	57.8	29.3
34		ι Tauri	4.5	+21 21	6.8	29.8	4 53 53.1	16.5	39.5
35		m Tauri	5	+18 26	35.2	57.6	4 58 20.6	43.6	6.1
*36		λ Eridani	4.5	— 8 58	6.0	27.9	5 01 49.8	11.8	33.6
37		β Orionis	1	— 8 23	27.6	49.0	5 07 11.2	33.4	54.9
38		21 Orionis	6	+ 2 26	27.8	49.2	5 11 11.0	32.9	54.3
39		β Tauri	2	+28 28	42.9	7.1	5 16 32.0	56.9	21.2
40	12	C Tauri	4.5	+27 34	52.5	16.8	5 43 41.4	6.0	30.3
41		α Orionis	1	+ 7 22	11.5	33.0	5 46 55.0	17.0	38.5
42		B Orionis	6	+ 0 32	17.0	38.5	5 51 00.2	22.0	43.5
43		3 Monocerotis	5.6	—10 36	59.0	20.8	5 54 42.9	4.9	26.8
44		ν Orionis	4.5	+14 47	6.1	28.2	5 58 50.8	13.4	35.5
45		θ Columbæ	5	—37 14	32.2	59.0	6 02 26.4	53.8	20.5
46		κ Aurigæ	4	+29 33	46.4	10.9	6 05 36.0	1.0	25.6
*47		Geminorum	7	+23 39	47.0	10.5	6 09 34.2	58.0	21.5
48		μ Geminorum	3	+22 35	54.8	18.0	6 13 41.5	5.1	28.4
49		z Aurigæ	6	+30 35	51.7	16.8	6 18 42.0	7.2	32.3
*50		D^1 Canis Maj.	5	—32 29	46.0	11.8	6 22 38.1	4.5	30.2
51		γ Geminorum	3	+16 32	7.3	29.5	6 28 52.5	15.5	37.8

November 9 and 10.—426 A. S. C. is a double star.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
3	02	48 00	— .109			+0	13.69	+2.08	3	02	34.20	*1
3	06	01.76	— .112				.69		3	05	47.96	2
3	10	29.88	— .216				.70		3	10	15.96	3
3	15	11.08	— .098				.70		3	14	57.28	4
3	18	48.90	— .168				.71		3	18	35.02	5
3	24	50.80	— .095				.71		3	24	37.00	6
3	29	18.60	— .294				.72		3	29	04.59	7
3	36	42.10	— .096				.73		3	35	28.27	*8
3	38	17.90	— .096	+0	13.70		.73		3	38	04.07	*9
3	43	00.52	— .413				.74		3	42	46.37	*10
3	47	52.02	— .392				.74		3	47	37.89	11
3	52	08.18	— .154				.75		3	51	54.28	12
8	55	33.62	— .106			+0	13.75	+2.03	3	55	19.76	13
3	35	39.37	— .095			+0	15.60	+1.89	3	35	23.68	14
3	35	43.82	— .096				.60		3	35	28.13	15
3	38	19.80	— .096	+0	15.59		.60		3	38	04.10	16
3	43	02.40	— .413				.61		3	42	46.38	*17
3	47	53.80	— .392				.61		3	47	37.80	18
3	50	54.26	— .274		15.68		.62		3	50	38.37	19
3	55	35.50	— .106				.62		3	55	19.77	*20
3	59	22.22	— .348				.63		3	59	06.24	21
4	04	23.86	— .242				.64		4	04	07.98	22
4	08	14.78	— .245				.64		4	07	58.90	23
4	13	12.10	— .087				.65		4	12	56.36	24
4	17	05.38	— .102				.65		4	16	49.63	25
4	20	36.60	— .205				.66		4	20	20.74	26
4	24	02.16	— .211				.66		4	23	46.29	27
4	27	05.30	— .134		15.58		.67		4	26	49.50	28
4	33	01.60	— .081				.67		4	32	45.85	29
4	36	44.42	— .408				.68		4	36	28.33	30
4	40	45.50	— .257				.68		4	40	29.56	31
4	45	22.50	— .235				.69		4	45	06.58	32
4	50	36.06	— .202				.70		4	50	20.16	*33
4	53	53.14	— .109				.70		4	53	37.33	34
4	58	20.62	— .123				.71		4	58	04.79	35
5	01	49.82	— .250				.71		5	01	33.86	*36
5	07	11.22	— .247		15.68		.72		5	06	55.25	37
5	11	11.04	— .198				.73		5	10	55.11	38
5	16	32.02	— .068	+0	15.80	+0	15.74	+1.89	5	16	16.21	39
5	43	41.40				+0	19.81	+1.74	5	43	21.59	40
5	46	55.00		+0	19.80		.82		5	46	35.18	41
5	51	00.24					.82		5	50	40.42	42
5	54	42.88					.83		5	54	23.05	43
5	58	50 80					.83		5	58	30.97	44
6	02	26.38					.84		6	02	06.54	45
6	05	35.98					.84		6	05	16.14	46
6	09	34.24					.84		6	09	14.40	*47
6	13	41.56		+0	19.86		.85		6	13	21.71	48
6	18	42.00					.85		6	18	22.15	49
6	22	38.12					.86		6	22	18.26	*50
6	28	52.52				+0	19.86	+1.74	6	28	32.66	51

No. 1. Observation doubtful.
8, 20, 33, 36, 47, 50. Two stars in the field of the instrument.
9. Four stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 12	α Canis Maj.	1	—16°30′	44.7	6.9	6 38 29.4	52.1	14.3
2	cont'd.	37 Geminorum	6	+25 34	5.0	28.8	6 45 52.8	16.9	40.7
3		Moon II	(18.9)	+26 19	52.8	17.3	6 52 42.3	7.3	31.8
4		γ Canis Maj.	4	—15 24	10.0	32.2	6 56 54.8	17.4	39.8
5		τ Geminorum	5.6	+30 30	31.6	56.8	7 01 22.0	47.2	12.3
6		δ Geminorum	3.4	+22 16	11.5	34.8	7 10 58.4	22.0	45.2
7	13	26 Canis Maj.	6	—25 41	16.6	40.5	7 06 04.7	28.9	52.8
8		δ Geminorum	3.4	+22 16	13.2	36.5	7 11 00.0	23.5	46.8
9		59 Geminorum	6.7	+27 56	13.0	37.5	7 15 02.1	26 7	51,3
10		β Canis Min.	3	+ 8 36	10.4	32.0	7 18 53.9	15.9	37.6
11		924 A. S. C.	6	—28 50	14.0	38.5	7 22 03.2	28.0	52.5
12		υ Geminorum	5	+27 15	41.0	5.2	7 26 29.6	54.1	18.4
13		α Canis Min.	1.2	+ 5 38	37.5	59 0	7 31 21.0	42.9	4.4
14		β Geminorum	2	+28 24	8.2	32.5	7 35 57 3	22.0	46.3
*15		c Arg. in pup.	4	—37 35	3.6	30.7	7 39 58.1	25.5	52.6
16		φ Geminorum	5	+27 10	19.8	43.6	7 44 08.2	32.8	56.5
17		1 Cancri	6	+16 13	35.0	57.4	7 48 20.0	42.5	4.8
18		3 Cancri	6	+17 44	17.5	39.8	7 52 02.5	25.3	47.8
19		Moon II	(20.0)	+23 05	59.6	23.6	7 57 48.0	12.5	36.5
20		15 Argus	3.4	—23 51	21.5	45.0	8 01 09.0	32.9	56.3
21		20 Argus	5	—15 19	39.0	1.5	8 06 24 0	46.5	8.9
22		λ Cancri	6	+24 31	39.2	3.0	8 11 26.9	50.8	14.6
23		22 Argus	6	—12 33	56.4	18.5	8 15 40.7	3.0	26.0
*24		2 Hydræ	6	— 3 28	9.7	31.1	8 18 52.9	14.6	36.0
25		θ Cancri	5.6	+18 38	8.0	30.6	8 22 53.6	16.6	39.2
26	Dec. 1	ε Pegasi	2.3	+ 9 09	26.0	46.5	21 37 08.6	30.7	52.3
27		μ Capricorni	5	—14 18	39.2	1.5	21 45 23.9	46 3	18.5
28		17 Pegasi	6	+11 19	13.0	35.1	21 49 57.5	19.7	41.5
29		30 Aquarii	6	— 7 17	57.2	18.9	21 55 40.8	2.7	24.5
30		α Aquarii	3	— 1 05	40.0	1.5	21 58 23.2	44.9	6.4
31		37 Aquarii	6.7	—11 36	5.1	27.0	22 02 49.2	11.5	33.5
*32		F Aquarii		—21 52	31.0	54.0	22 06 17.5	41.0	4.0
33		D Aquarii	6	—14 06	30.8	52.5	22 11 15.1	37.6	59.5
34		49 Aquarii	6	—25 34	37.8	1.6	22 15 25.8	49.9	13.6
35		H^1 Pegasi	6	+ 3 36	35.0	56.5	22 19 18.4	40.3	1.8
36		σ Aquarii	5	—11 29	16.8	38.2	22 23 00.5	22.8	44.8
37		Moon I	(7.8)	— 8 09	39.0	1.1	22 28 23.6	46.2	8.4
38		κ Aquarii	6	— 5 03	34.5	56.1	22 30 18.0	39.8	1.4
39		ζ Pegasi	3	+10 00	34.5	56.2	22 34 18.4	40.6	2.3
40		45 Pegasi	6	+18 32	44.8	7.5	22 38 30.6	53.6	16.2
41		τ^2 Aquarii	4	—14 26	12.3	34.6	22 41 57.1	19.6	41.6
42		λ Aquarii	4	— 8 26	22.4	44.0	22 45 06.0	28.0	49.6
43		α Piscis Aus.	1	—30 28	48.3	13.2	22 49 38.6	4.0	29.0
44		x^2 Piscium	6	— 0 40	32.3	53.7	22 53 16.5	37.3	58.8
45		α Pegasi	2	+14 21	52.3	14.5	22 57 37.2	59.8	21.8
46	2	κ Aquarii	6	— 5 03	35.5	57.2	22 30 19.0	40.8	2.4
47		ζ Pegasi	3	+10 00	35.5	57.4	22 34 19.4	41.4	3.3
48		45 Pegasi	6	+18 32	46.0	8.8	22 38 31.5	54.3	17.0
49		τ^2 Aquarii	4.5	—14 26	13.2	35.3	22 41 58.0	20.7	42.8
50		λ Aquarii	4	— 8 26	23.4	45.1	22 45 07.0	29.0	50.8

November 12.—*q* Monocerotis precedes 2 Hydræ 47*s*.30.

December 1.—☽ ☌ N Aquarii. F Aquarii is a double star.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
6	38	29.48		+0	19.87	+0	19.88	+1.74	6	38	09.60	1
6	45	52.84					.89		6	45	32.95	2
6	52	42.30					.90		6	52	22.40	3
6	56	54.82					.90		6	56	34.92	4
7	01	21.98					.91		7	01	02.07	5
7	10	58.38		+0	19.92	+0	19.92	+1.74	7	10	38.46	6
7	06	04.70	— .334			+0	21.37	+1.48	7	05	43.00	7
7	11	00.00	— .103	+0	21.41		.37		7	10	38.58	8
7	15	02.12	— .072				.38		7	14	40.67	9
7	18	53.96	— .171				.38		7	18	32.41	10
7	22	03.24	— .352				.38		7	21	41.51	11
7	26	29.66	— .076				.39		7	26	08.19	12
7	31	20.96	— .184		21.42		.39		7	30	59.39	13
7	35	57.26	— .069		21.38		.40		7	35	35.79	14
7	39	58.10	— .409				.40		7	39	36.29	*15
7	44	08.18	— .076				.40		7	43	46.70	16
7	48	19.94	— .134				.41		7	47	58.40	17
7	52	02.58	— .126				.41		7	51	41.04	18
7	57	48.04	— .099				.42		7	57	26.52	19
8	01	08.94	— .323	+0	21.38		.42		8	00	47.20	20
8	06	23.98	— .280				.43		8	06	02.27	21
8	11	26.90	— .091				.43		8	11	05.38	22
8	15	40.72	— .267				.44		8	15	19.01	23
8	18	52.86	— .225				.44		8	18	31.20	*24
8	22	53.60	— .122			+0	21.44	+1.48	8	22	32.04	25
21	37	08.62	— .724	+0	45.37	+0	45 40	+1.00	21	36	22.50	26
21	45	23.88	—1.190				.40		21	44	37.29	27
21	49	57.36	— .680				.41		21	49	11.27	28
21	55	40.82	—1.046				.41		21	54	54.36	29
21	58	23.20	— .921		45.27		.41		21	57	36.87	30
22	02	49.26	—1.134				.41		22	02	02.72	31
22	06	17.50	—1.354				.41		22	05	30.74	*32
22	11	15.10	—1.226				.42		22	10	28.45	33
22	15	25.74	—1.440				.42		22	14	38.88	34
22	19	18.40	— .834				.42		22	18	32.15	35
22	23	00.52	—1.132				.43		22	22	13.96	36
22	28	23.66	—1.064				.43		22	27	37.17	37
22	30	17.96	—1.004				.43		22	29	31.53	38
22	34	18.40	— .706		45.52		.43		22	33	32.26	39
22	38	30.54	— .528				.44		22	37	44.57	40
22	41	57.04	—1.192				.44		22	41	10.41	41
22	45	06.00	—1.070				.44		22	44	19.49	42
22	49	38.62	—1.564		45.49		.44		22	48	51.62	43
22	53	15.52	— .918				.45		22	52	29.15	44
22	57	37.12	— .618	+0	45.49	+0	45.45	+1.00	22	56	51.05	45
22	30	18.98	—1.130			+0	46.46	+0.90	22	29	31.39	46
22	34	19.40	— .794	+0	46.44		.47		22	33	32.14	47
22	38	31.52	— .594				.47		22	37	44.46	48
22	41	58.00	—1.342				.47		22	41	10.19	49
22	45	07.06	—1.204			+0	46.47	+0.90	22	44	19.39	50

Nos. 15, 24. Three stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 2	α Piscis Aus.	1	—30°28′	49.6	14.6	22 49 39.7	4.9	30.0
2	cont'd.	x^2 Piscium	6	— 0 40	33.1	54.5	22 53 16.3	38.2	59.7
3		α Pegasi	2	+14 21	53.5	15.8	22 57 38.2	0.6	22.9
4		A Piscium	6	+ 1 16	37.0	58.3	23 01 20.2	42.0	3.4
5		60 Pegasi	6	+25 59	5.8	29.5	23 04 53.7	18.0	41.8
6		61 Pegasi	6	+27 23	59.5	23.5	23 08 48.0	12.5	36.5
*7		96 Aquarii	6	— 6 00	13.6	35.3	23 11 57.2	19.1	40.6
8		Moon I	(8.9)	— 2 12	21.8	43.6	23 15 05.9	28.2	50.1
*9		κ^1 Piscium	5.6	+ 0 23	51.6	13.2	23 19 34.9	56.7	18.0
10		b^4 Aquarii	5	—21 47	59.2	22.2	23 25 45.6	8.9	32.0
11		16 Piscium	6	+ 1 13	21.5	48.0	23 29 04.7	26.4	47.9
12		ι Piscium	4.5	+ 4 46	51.1	12.5	23 32 34.3	56.2	17.6
13		λ Piscium	5	+ 0 54	0.7	22.4	23 34 44.1	5.9	27.4
*14	3	κ^1 Piscium	5.6	+ 0 23	52.1	13.5	23 19 35.2	57.0	18.5
15		b^4 Aquarii	5	—21 47	59.0	22.0	23 25 45.6	9.2	32.3
16		16 Piscium	6	+ 1 13	21.6	43.0	23 29 04.8	26.5	48.0
17		ι Piscium	4.5	+ 4 46	51.3	12.9	23 32 34.8	56.6	18.2
18		λ Piscium	5	+ 0 54	1.2	22.6	23 34 44.3	6.1	27.6
*19		A^4 Aquarii	6	—19 34	48.0	10.6	23 38 33.8	57.0	19.7
20		79 Pegasi	6	+27 57	36.2	0.5	23 42 25.2	49.9	14.3
21		25 Piscium	6.7	+ 1 12	1.5	23.0	23 45 44.7	6.3	27.9
22		ψ Pegasi	5	+24 15	40.6	4.1	23 50 28.0	51.9	15.6
23		q Piscium	5	— 3 55	45.8	7.2	23 54 28.9	50.8	12.2
24		s Piscium	5	— 6 36	16.9	38.3	23 58 00.2	22.2	43.6
25		α Andromedæ	1	+28 13	9.7	34.1	0 00 58.8	23.5	48.0
26		Moon I	(9.9)	+ 4 01	12.6	34.5	0 02 56.8	19.2	41.1
*27		B Piscium	6	+ 7 56	52.6	14.2	0 07 36.1	58.1	14.8
28	7	δ Arietis	4	+19 07	39.0	1.6	3 03 24.8	47.9	10.5
29		ζ Arietis	5	+20 27	52.2	15.0	3 06 38.2	1.5	24.2
30		k^2 Ceti	5.6	— 1 31	23.6	45.2	3 11 06.8	28.6	50.1
31		g Arietis	5.6	+24 09	0.6	24.0	3 15 47.9	11.7	35.2
32		ξ Tauri	4	+ 9 10	42.0	3.5	3 19 25.7	47.8	9.4
33		17 Eridani	4.5	— 5 37	52.6	14.1	3 23 36.1	58.1	19.6
34		t^2 Eridani	4	—22 10	52.2	15.2	3 27 38.8	2.4	25.5
35		21 Eridani	6	— 6 08	19.4	41.0	3 32 02.9	24.7	46.4
*36		b Pleiadum	4.5	+23 36	31.6	55.2	3 36 19.0	42.7	6.1
*37		η Tauri	3	+23 36	7.7	31.1	3 38 54.8	18.5	42.0
*38		f Pleiadum	5	+23 34	48.0	11.6	3 40 35.2	58.9	22.5
39		g Eridani	5	—36 41	29.7	56.5	3 44 23.6	50.7	17.5
40		i Eridani	5	—35 12	35.8	1.7	3 48 28.6	55.4	21.2
41		Moon I	(14.0)	+25 25	50.6	15.1	3 53 39.9	4.8	29.4
42		41 Tauri	6	+27 10	55.7	20.0	3 57 44.4	8.8	32.9
43		P Tauri	6	+26 03	14.0	37.8	4 02 02.1	26.5	50.3
44		47 Tauri	5.6	+ 8 51	26.6	48.2	4 06 10 2	32.2	53.9
45		γ Tauri	3.4	+15 14	52.7	15.0	4 11 37.4	59.9	22.5
46		υ^1 Tauri	5	+22 26	53.5	17.1	4 17 40.6	4.1	27.5
*47		80 Tauri	6	+15 17	12.5	34.5	4 21 57.2	19.9	42.0
48		α Tauri	1	+16 11	55.0	17.8	4 27 40 7	3.6	26.4
49		τ Tauri	5	+22 39	48.2	11.5	4 33 35.2	59.0	22.2
50	8	γ Tauri	3.4	+15 14	53.0	15.5	4 11 38.0	0.5	22.9

December 3.—A^4 Aquarii is a double star; the magnitudes being one 6th, and the other 7th. B Piscium is double; the brighter being of the 6th, and the lesser of the 7th magnitude.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*m. s.*	*m. s.*	*s.*	*h. m. s.*	
22 49 39.76	—1.760	+0 46.45	+0 46.48	+0.90	22 48 51.52	1
22 53 16.36	—1.032		.48		22 52 28.85	2
22 57 38.20	— .694	46.51	.48		22 56 51.03	3
23 01 20.18	— .988		.48		23 00 32.71	4
23 04 53.76	— .402		.49		23 04 06.87	5
23 08 48.00	— .362		.49		23 08 01.15	6
23 11 57.16	—1.150		.49		23 11 09.52	*7
23 15 05.92	—1.066		.49		23 14 18.36	8
23 19 34.68	—1.008		.50		23 18 47.37	*9
23 25 45.58	—1.522		.50		23 24 57.56	10
23 29 04.70	— .990		.50		23 28 17.21	11
23 32 34.34	— .934	+0 46.53	.50		23 31 46.91	12
23 34 44.10	— .996		+0 46.51	+0.90	23 33 56.59	13
23 19 35.26	— .499		+0 47.36	+0.80	23 18 47.40	*14
23 25 45.62	— .751		.36		23 24 57.51	15
23 29 04.78	— .489		.36		23 28 16.93	16
23 32 34.76	— .451	+0 47.41	.36		23 31 46.95	17
23 34 44.36	— .492		.36		23 33 56.51	18
23 38 33.82	— .723		.36		23 37 45.74	*19
23 42 25.22	— .172		.36		23 41 37.69	20
23 45 44.68	— .489		.37		23 44 56.82	21
23 50 28.04	— .222		.37		23 49 40.45	22
23 54 28.98	— .546		.37		23 53 41.06	23
23 58 00.24	— .594		.37		23 57 12.28	24
0 00 58.82	— .168	+0 47.31	.37		0 00 11.28	25
0 02 56.84	— .458		.37		0 02 09.01	26
0 07 36.16	— .416		+0 47.38	+0.80	0 06 48.36	*27
3 03 24.76	— .351		+0 50.21	+0.51	3 02 34.20	28
3 06 38.22	— .329		.21		3 05 47.68	29
3 11 06.86	— .635		.21		3 10 16.02	30
3 15 47.88	— .274		.21		3 14 57.40	31
3 19 25.68	— .493		.21		3 18 34.98	32
3 23 36.10	— .689		.21		3 22 46.20	33
3 27 38.82	— .926		.21		3 26 47.68	34
3 32 02.88	— .697		.22		3 31 11.96	35
3 36 18.92	— .285		.22		3 35 28.42	*36
3 38 54.82	— .285	+0 50.16	.22		3 38 04.32	*37
3 40 35.24	— .285		.22		3 39 44.74	*38
3 44 23.60	—1.183		.22		3 43 32.20	39
3 48 28.54	—1.153		.22		3 47 37.17	40
3 53 39.96	— .252		.22		3 52 49.49	41
3 57 44.36	— .223		.22		3 56 53.92	42
4 02 02.14	— .242		.23		4 01 11.67	43
4 06 10.22	— .497		.23		4 05 19.49	44
4 11 37.50	— .407		.23		4 10 46.86	45
4 17 40.56	— .299		.23		4 16 50.03	46
4 21 57.22	— .407		.23		4 21 06.58	*47
4 27 40.70	— .394	+0 50.32	.23		4 26 50.08	48
4 33 35 22	— .298		+0 50.23	+0.51	4 32 44.69	49
4 11 37.98	— .407		+0 50.69	+0.67	4 10 46.88	50

Nos. 7, 9, 11, 36, 47. Two stars in the field of the instrument.
37, 38. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 8	υ^1 Tauri	5	+22°26′	54.1	17.5	4 17 41.0	4.5	27.8
2	cont'd.	α Tauri	1	+16 11	56.0	18.3	4 27 41.0	3.8	26.1
3		τ Tauri	5	+22 39	48.6	11.7	4 33 35.4	59.0	22.2
4		ω Eridani	5	— 5 43	15.2	36.5	4 45 58.4	20.3	41.8
5		Moon I	(15.1)	+27 25	21.1	46.3	5 04 11.6	37.0	2.2
6		Moon II	(15.1)	+27 25	59.1	24 3	5 06 49.7	15.1	40.3
7		β Tauri	2	+28 28	18.5	43.0	5 17 07.7	32.5	57.0
8		ϑ Leporis	4	—20 53	33.2	56.2	5 22 19.7	43.0	6.0
9		α Leporis	3.4	—17 56	51.0	13.6	5 26 36.7	59.7	22.3
10		ε Orionis	2 3	— 1 19	18.8	40.2	5 29 02.0	23.8	45.2
11		C Tauri	4.5	+27 34	24.6	48.8	5 44 13.3	37.8	2.1
12		α Orionis	1	+ 7 22	43.4	5.0	5 47 26.9	48.8	10.4
13	9	β Tauri	2	+28 28	19.5	44.0	5 17 08.6	33.3	57.8
14		α Leporis	3.4	—17 56	52.0	14.5	5 26 37.4	0.3	22.8
15		ε Orionis	2.3	— 1 19	19.6	41.0	5 29 02.7	24.4	45.9
16		C Tauri	4.5	+27 34	25.2	49.5	5 44 14.0	38.5	2.8
17		α Orionis	1	+ 7 22	44.0	5.7	5 47 27.7	49.6	11.2
18	10	ν^3 Canis Maj.	5.6	—18 06	3.2	25.8	6 31 48.6	11.5	34.2
19		ε Geminorum	3	+25 17	15.4	39.2	6 35 03.4	27.6	51.4
20		α Canis Maj.	1	—16 30	18.0	40.4	6 39 03.2	26.0	48.4
21		*d* Geminorum	6.7	+21 55	9 0	32.2	6 42 55.6	19.1	42.3
*22		e^1 Geminorum	5.6	+13 22	50.4	12.6	6 46 34.8	57.1	19.3
23		μ Canis Maj.	5.6	—13 50	59.6	21.8	6 49 44.1	6.4	28.5
24		ε Canis Maj.	2.3	—28 45	28.4	52.7	6 53 17.7	42.6	6.9
*25		ζ Geminorum	4	+20 48	48.7	11.6	6 55 35.0	58.4	21.4
*26		*o* Geminorum	6	+16 11	24.4	46.5	7 00 09.3	32.1	54.3
*27		*m* Monocerotis	4.5	— 0.14	56.0	17.3	7 04 39.0	0.8	22.2
28		e^1 Canis Maj.	4.5	—26 05	53.2	17.1	7 08 41.3	5.5	29.5
29		δ Geminorum	3.4	+22 16	45.1	8.2	7 11 31.7	55.2	18.3
30		59 Geminorum	6.7	+27 56	45.2	9.5	7 15 34.0	58.5	22.8
31		β Canis Min.	3	+ 8 36	42.2	3.7	7 19 25.8	47.9	9.5
32		δ^1 Canis Min.	6	+ 2 15	1.5	23.0	7 24 44.7	6.3	27.8
33		Moon II	(17.2)	+24 37	42 4	6.8	7 28 31.5	56.2	20.5
*34		α Canis Min.	1.2	+ 5 38	9.5	31.0	7 31 52.8	14.7	36.2
35		β Geminorum	2	+28 24	40.1	4.4	7 36 29.1	53.9	18.4
*36		*c* Arg. in pup.	4	—37 35	35.8	2.9	7 40 30.5	58.1	25.3
37		φ Geminorum	5	+27 10	51.4	15.5	7 44 39.9	4.3	28 5
38	11	α Canis Min.	1.2	+ 5 38	10.1	31.7	7 31 53.6	15.4	37.0
39		β Geminorum	2	+28 24	40.7	5.1	7 36 29.9	54.8	19.3
40		Moon II	(18.2)	+20 19	12.8	36.5	8 33 00.2	23.9	47.6
41	13	*o* Leonis	4	+10 37	52.3	14.0	9 33 36.2	58.4	20.2
42		ε Leonis	3	+24 30	58.0	21.6	9 37 45.5	9.5	33.2
43		20 Leonis	7	+21 55	5.5	28.8	9 41 52.3	15.8	39.0
44		*d* Sextantis	6	— 7 22	51.1	13.0	9 45 34.8	56.6	18.5
45		ν Leonis	6	+13 12	52.0	14.2	9 50 36.5	58.8	20.9
46		1199 A. S. C.	7	—12 32	3.0	25.0	9 55 47.3	9.6	31.5
47		α Leonis	1	+12 45	6.1	28.0	10 00 50.5	12.9	34.8
48		1215 A. S. C.	6	— 6 32	34 3	56.0	10 04 17.8	39.7	1.4
49		ζ Leonis	4.5	+24 13	59.5	23.0	10 08 46.8	10.6	34.2

December 8.—Misty; the magnitudes uncertain.
9, 11.—Observation on both days interrupted by clouds.
10.—e^1 Geminorum is a double star.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
4	17	40.98	— .299			+0	50 69	+0.67	4	16	49.99	1
4	27	41.04	— .394	+0	50.65		.69		4	26	49.96	2
4	33	35.38	— .298				.70		4	32	44.38	3
4	45	58.44	— .690				.70		4	45	07.05	4
5	04	11.64	— .221				.71		5	03	20.71	5
5	06	49.70	— .221				.71		5	05	58.77	6
5	17	07.74	— .201		50.79		.72		5	16	16.82	7
5	22	19.62	— .907				.72		5	21	27.99	8
5	26	36.66	— .862		50 80		.72		5	25	45.08	9
5	29	02.00	— .633		50.70		.72		5	28	10.65	10
5	44	13.32	— .220				.73		5	43	22.37	11
5	47	26.90	— .516	+0	50.65	+0	50.73	+0.67	5	46	35.65	12
5	17	08.64	— .162	+0	51.72	+0	51.60	+0.77	5	16	16.88	13
5	26	37.40	— .695		51.70		.60		5	25	45.11	14
5	29	02.72	— .510		51.53		.60		5	28	10.61	15
5	44	14.00	— .175				.61		5	43	22.22	16
5	47	27.64	— .416	+0	51.46	+0	51.61	+0.77	5	46	35.61	17
6	31	48.66	— .661			+0	52.29	+0.70	6	30	55.71	18
6	35	03.40	— .195				.29		6	34	10.92	19
6	39	03.20	— .643	+0	52 30		.29		6	38	10.27	20
6	42	55.64	— .235				.29		6	42	03.12	21
6	46	34.84	— .331				.29		6	45	42.22	*22
6	49	44.08	— .615				.29		6	48	51.18	23
6	53	17.66	— .791		52.42		.30		6	52	24.57	24
6	55	35.02	— .249				.30		6	54	42.47	*25
7	00	09.32	— .260				.30		6	59	16.76	*26
7	04	39.06	— .474				.30		7	03	46.29	*27
7	08	41.32	— .756				.30		7	07	48.26	28
7	11	31.70	— .231	+0	52.18		.31		7	10	39.16	29
7	15	34.00	— .161				.31		7	14	41.53	30
7	19	25.82	— .382				.31		7	18	33.13	31
7	24	44.66	— .448				.31		7	23	51.90	32
7	28	31.48	— .203				.31		7	27	38.97	33
7	31	52.84	— .413		52.31		.32		7	31	00.11	*34
7	36	29.18	— .155	+0	52.35		.32		7	35	36 71	35
7	40	30.52	— .910				.32		7	39	36.29	*36
7	44	39.92	— .171			+0	52.32	+0.70	7	43	47.43	37
7	31	53.56	— .413	+0	53.01	+0	53.05	+0.81	7	31	00.10	38
7	36	29.96	— .155	+0	53.10		.05		7	35	36.76	39
8	33	00.20	— .255			+0	53.09	+0.81	8	32	06.86	40
9	33	36.22	— .289			+0	55.00	+1.84	9	32	40.93	41
9	37	45.56	— .164	+0	55.02		.00		9	36	50.40	42
9	41	52.28	— .188				.01		9	40	57.08	43
9	45	34.80	— .437				.01		9	44	39.35	44
9	50	36.48	— .267				.02		9	49	41.19	45
9	55	47.28	— .480				.02		9	54	51.78	46
10	00	50.46	— .271	+0	55.03		.03		9	59	55.16	47
10	04	17.84	— .430				.04		10	03	22.37	48
10	08	46.82	— .166			+0	55.04	+1.84	10	07	51.61	49

Nos. 25, 26, 27, 34. Two stars in the field of the instrument.
36. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 13	γ Leonis	2	+20°39′	23.3	45.2	10 12 08.6	32.0	54 0
2	cont'd.	r Arg. in vel.	4.5	—40 51	30.8	59.2	10 16 28.0	56.8	25.3
3		a Anti. Pneu.	4.5	—30 15	59.8	24.3	10 20 49.5	14.8	39.3
4		Moon II	(20.3)	+ 8 42	36.1	58.1	10 25 20.7	43.3	5.3
5		l Hyd. & Crat.	6	—15 31	42.5	4.7	10 29 27.5	50.2	12.4
6		m Sextantis	6	— 0 54	32.1	53.5	10 34 15.2	37.0	58.4
7		o^1 Sextantis	6	+ 7 13	1.6	23.2	10 38 45.0	6.9	28.5
8		ν Hyd. & Crat.	4	—15 22	58.5	20.8	10 42 43.3	5.9	28.3
9		b^3 Hyd. & Crat.	5.6	—19 17	53.6	16.6	10 46 39.6	2.6	25.5
10		1299 A. S. C.	5	—36 18	22.1	48.7	10 50 15.6	42 6	9.2
11		d Leonis	5	+ 4 28	33.8	55.2	10 53 17.1	39.0	0.4
12	14	ρ Leonis	4	+10 08	40.7	2.5	10 25 24.6	46.7	8.5
13		l Hyd. & Crat	6	—15 31	44.7	7.0	10 29 29.6	52.3	14.7
14		m Sextantis	6	— 0 54	34.2	55.7	10 34 17.5	39.2	0.8
15		ν Hyd. & Crat.	4	—15 22	0.9	23.2	10 42 45.8	8.3	30.5
16		b^3 Hyd. & Crat	5.6	—19 17	56.0	18.8	10 46 41.8	4.7	27.5
17		1299 A. S. C.	5	—36 18	24.2	51.0	10 50 18.1	45.2	11.9
18		d Leonis	5	+ 4 28	36.0	57.5	10 53 19.3	41.1	2.7
19		χ Leonis	4.5	+ 8 12	3.6	25.2	10 57 47.1	9.0	30.7
20		10 Hyd. & Crat.	5	—27 13	12.7	37.0	11 02 01.5	26.0	50.2
21		δ Leonis	3	+21 24	50.7	13.5	11 06 37.0	0.4	23.2
22		δ Hyd. & Crat.	3.4	—13 55	37.7	59.6	11 12 22.2	44.7	6 8
23		Moon II	(21.3)	+ 2 21	42.5	4.4	11 15 26.7	49.1	10.9
24		τ Leonis	4	+ 3 44	0.7	22.1	11 20 43.9	5.6	27.2
*25		17 Hyd. & Crat.	5.6	—28 23	33.5	57.5	11 25 22.4	47.2	11.5
26		υ Leonis	4.5	+ 0 03	3 6	25.0	11 29 46.8	8.6	30.1
27		92 Leonis	5.6	+22 14	42.0	5.2	11 33 28.7	52.2	15.5
28		ζ Hyd. & Crat.	4	—17 28	55.6	18.2	11 37 40.9	3.7	26.3
29		β Virginis	3.4	+ 2 40	39.6	1.2	11 43 23.0	44.8	6 4
*30	15	τ Leonis	4	+ 3 44	2.5	24.0	11 20 45.8	7.6	29.1
31		υ Leonis	4.5	+ 0 03	5.5	27.0	11 29 48.7	10.3	31.9
32		92 Leonis	5.6	+22 14	44.1	7.2	11 33 30.6	54.1	17.3
33		ζ Hyd & Crat.	4	—17 28	57.5	20.0	11 37 42.7	5.4	27.8
34		β Virginis	3.4	+ 2 40	41.5	3.0	11 43 24.8	46.6	8.0
35		A Virginis	5.6	+ 9 20	9.7	31.4	11 47 53.5		
36		Moon II	(22.4)	— 3 54	43.5	5.5	12 03 27.8	50.0	11.9
37		γ Corvi	3	—16 39	53.0	15.4	12 08 38.0	0.6	23.0
38		η Virginis	3.4	+ 0 13	3.1	24.5	12 12 46.2	8.0	29.5
39		f Comæ Ber.	5	+26 59	30.8	54.8	12 17 19.3	43.7	7.7
40		d Comæ Ber.	5.6	+26 48	9.1	33.1	12 21 57.5	22 0	46.0
41	16	γ Corvi	3	—16 39	54.3	16.6	12 08 39.3	2.0	24.4
42		η Virginis	3.4	+ 0 13	4.5	25.8	12 12 47.6	9.4	30.8
43		f Comæ Ber.	6	+26 59	32.2	56.1	12 17 20.5	45.0	9.0
*44		d Comæ Ber.	5.6	+26 48	10.5	34.5	12 21 58.9	23.4	47.4
45		q Virginis	5.6	— 8 34	52.2	13.9	12 26 35.9	57.9	19.6
46		χ Virginis	5.6	— 7 07	20.4	41.8	12 32 03.7	25.7	47.2
47		e Hyd.& Crat.	6	—27 27	45.4	9.6	12 36 34.1	58.6	22.9
48		30 Comæ Ber.	6	+28 25	44.0	8.3	12 42 33.1	57.9	22.4
49		q Comæ Ber.	5	+22 07	42.1	5.2	12 46 28.6	52.1	15.3
50		Moon II	(23.4)	— 9 48	2.3	24.7	12 50 47.4	10.0	32.3

December 14.—☽ ☌ q and 76 Leonis. 17 Hyd & Crat. is double; each star of the 5.6 magnitude.
15.—Observation interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
10	12	08.62	— .200			+0	55.05	+1.84	10	11	13.37	1
10	16	28.02	— .780				.05		10	15	32.19	2
10	20	49.54	— .649				.06		10	19	53.83	3
10	25	20.70	— .306				.06		10	24	25.33	4
10	29	27.46	— .506				.07		10	28	31.88	5
10	34	15.24	— .384				.08		10	33	19.78	6
10	38	45.04	— .317				.08		10	37	49.64	7
10	42	43.36	— .504				.09		10	41	47.77	8
10	46	39.58	— .540				.09		10	45	43.95	9
10	50	15.64	— .720				.10		10	49	19.82	10
10	53	17.00	— .340			+0	55.10	+1.84	10	52	21.56	11
10	25	24.60	— .306			+0	57.22	+2.06	10	24	27.07	12
10	29	29.66	— .506				.23		10	28	31.92	13
10	34	17.48	— .384				.23		10	33	19.87	14
10	42	45.74	— .504				.25		10	41	47.99	15
10	46	41.76	— .540				.25		10	45	43.97	16
10	50	18.08	— .720				.26		10	49	20.10	17
10	53	19.32	— .340				.26		10	52	21.72	18
10	57	47.12	— .310				.27		10	56	49.54	19
11	02	01.48	— .617				.27		11	01	03.59	20
11	06	36.96	— .193	+0	57.28		.28		11	05	39.49	21
11	12	22.20	— .493	+0	57.28		.28		11	11	24.43	22
11	15	26.72	— .358				.29		11	14	29.07	23
11	20	43.90	— .346				.29		11	19	46.26	24
11	25	22.42	— .629				.30		11	24	24.49	*25
11	29	46.82	— .377				.30		11	28	49.14	26
11	33	28.72	— .185				.31		11	32	31.23	27
11	37	40.94	— .524				.31		11	36	43.11	28
11	43	23.00	— .355			+0	57.32	+2.06	11	42	25.33	29
11	20	45.80	— .346			+0	59.14	+1.64	11	19	46.31	*30
11	29	48.68	— .377				.15		11	28	49.15	31
11	33	30.66	— .185				.16		11	32	31.32	32
11	37	42.68	— .524				.16		11	36	43.00	33
11	43	24.78	— .355				.17		11	42	25.26	34
11	47	53.49	— .301				.17		11	46	54.02	85
12	03	27.74	— .409				.19		12	02	28.14	36
12	08	38.00	— .517				.20		12	07	38.28	37
12	12	46.26	— .378				.20		12	11	46.68	38
12	17	19.26	— .139				.21		12	16	19.91	39
12	21	57.54	— .140			+0	59.21	+1.64	12	20	58.19	40
12	08	39.32	— .517			+1	00.48	+1.27	12	07	38.32	41
12	12	47.62	— .378				.48		12	11	46.76	42
12	17	20.56	— .139				.48		12	16	19.94	43
12	21	58.94	— .140				.49		12	20	58.31	*44
12	26	35.90	— .447				.49		12	25	34.96	45
12	32	03.76	— .435				.50		12	31	02.83	46
12	36	34.06	— .620				.50		12	35	32.94	47
12	42	33.14	— .121				.50		12	41	32.52	48
12	46	28.66	— .185				.51		12	45	27.97	49
12	50	47.34	— .458			+1	00.51	+1.27	12	49	46.37	50

No. 30. Three stars in the field of the instrument.
44. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1840.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 16 cont'd.	g Virginis	5.6	— 9°53′	51.5	13.2	13 00 35.3	57.5	19.3
2		ι Centauri	3	—35 52	48.5	15.1	13 12 41.8	8.5	35.3
3		α Virginis	1	—10 20	6.4	28.1	13 17 50.3	12.5	34.3
4	17	g Virginis	5.6	— 9 53	52.8	14.5	13 00 36.5	58.6	20.4
5		α Virginis	1	—10 20	7.5	29.5	13 17 51.5	13.5	35.5
6		Moon II	(24.4)	—15 10	51.6	14.2	13 38 37.3	0.5	23.3
7		η Bootis	3	+19 12	22.8	45.5	13 48 08.5	31.5	54.3
8	28	α Andromedæ	1	+28 13	32.7	57.1	0 01 21.7	46.3	10.9
9		γ Pegasi	2.3	+14 18	29.9	52.0	0 06 14.5	37.0	59.1

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
13	00	35.36	— .458			+1	00.52	+1.27	12	59	34.38	1
13	12	41.84	— .714				.53		13	11	40.60	2
13	17	50.32	— .462	+1	00.44	+1	00.53	+1.27	13	16	49.33	3
13	00	36.56	— .572			+1	01.46	+1.20	12	59	34.53	4
13	17	51.50	— .577	+1	01.46		.46		13	16	49.46	5
13	38	37.36	— .629				.46		13	37	35.27	6
13	48	08.52	— .264	+1	01.48	+1	01.46	+1.20	13	47	06.80	7
0	01	21.74		+1	10.71	+1	10.74	+1.10	0	00	11.00	8
0	06	14.50		+1	10.77	+1	10.74	+1.10	0	05	03.76	9

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Feb. 25	21 Andromedæ α	1	5	0 00 06.86	—0.680	0 00 07.54
26		1	5	06.93	.683	07.61
July 19		1	5	10.42	+2.678	07.63
20		1	5	10.46	.709	07.75
Sept. 8		1	5	11.57	3.801	07.77
11		1	5	11.62	.337	07.78
12		1	5	11.65	.848	07.80
Nov. 6		1	5	11.65	.885	07.77
Dec. 3		1	5	11.28	.621	07.66
28		1	5	11.00	.303	07.70
Means		1				0 00 07.700
July 19	88 Pegasi γ	2.3	5	0 05 02.89	+2.719	0 05 00.17
20		2.3	5	03.06	.749	00.31
Aug. 16		2.3	5	03.64	3.407	00.23
Sept. 8		2.3	5	04.08	.831	00.25
11		2.3	5	04.04	.867	00.17
12		2.3	5	03.99	.877	00.11
Nov. 6		2.3	5	04.17	.965	00.21
Dec. 28		2.3	5	03.76	.482	00.28
Means		2.3				0 05 00.213
Oct. 9	35 Piscium B	6	5	0 06 48.50	+4.075	0 06 44.43
Dec. 3		6	5	48.36	3.797	44.56
Means		6				0 06 44.494
Sept. 12	8 Ceti ι	4	5	0 11 20.43	+4.086	0 11 16.34
Nov. 6		4	5	20.56	.167	16.39
Means		4				0 11 16.368
July 19	41 Piscium d	5.6	5	0 12 24.95	+2.858	0 12 22.09
20		5.6	5	24.95	.886	22.07
Aug. 16		5.6	5	25.56	3.543	22.02
Oct. 9		5.6	5	26.28	4.038	22.24
Means		5.6				0 12 22.105
Sept. 12	9 Ceti	6	5	0 14 43.87	+4.101	0 14 39.77
Nov. 6		6	5	43.78	.213	39.57
Means		6				0 14 39.668
July 19	Phœnicis α	2	5	0 18 24.93	+3.330	0 18 21.60
Sept. 12		2	5	26.76	4.824	21.94
13		2	5	26.52	.858	21.66
Nov. 6		2	5	26.19	.817	21.37
Means		2				0 18 21.643

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
July 19	12 Ceti *n*	6	5	0 21 54.91	+2.770	0 21 52.14
20		6	5	55.14	.800	52.34
Sept. 12		6	5	56.52	4.016	52.50
13		6	5	56.25	.029	52.22
Means		6				0 21 52.303
Nov. 6	38 A. S. C.	6	5	0 22 26.49	+4.387	0 22 22.103
July 19	49 A. S. C.	6.7	5	0 26 40.48	+2.663	0 26 37.82
20		6.7	5	40.52	.695	37.83
Sept. 13		6.7	5	41.90	3.895	38.01
Means		6.7				0 26 37.887
Sept. 12	30 Andromedæ *ε*	4	5	0 30 10.93	+3.889	0 30 07.04
13		4	5	10.56	.904	06.66
Means		4				0 30 06.848
July 19	31 Andromedæ *δ*	3	5	0 30 49.35	+2.535	0 30 46.82
20		3	5	49.84	.567	47.27
Nov. 6		3	5	51.29	4.120	47.17
Means		3				0 30 47.087
July 19	16 Ceti *β*	2.3	5	0 35 36.13	+2.799	0 35 33.33
20		2.3	5	36.12	.830	33.29
Aug. 16		2.3	2	36 77	3.545	33.23
Sept. 8		2.3	5	37.21	4.055	33.16
11		2.3	5	37.37	.101	33.26
12		2.3	5	37.40	.115	33.28
13		2.3	5	37.42	.129	33.29
Nov. 6		2.3	5	37.60	.326	33.27
Means		2.3				0 35 33.263
July 19	63 Piscium *δ*	5	5	0 40 25.73	+2.597	0 40 23.13
20		5	5	25.82	.626	23.20
Sept. 11		5	5	27.14	3.873	23.27
12		5	5	27.04	.888	23.15
13		5	5	26.89	.902	22.99
Nov. 6		5	5	27.32	4.166	23.15
Means		5				0 40 23.150
July 20	20 Ceti *m*	5	5	0 44 52.61	+2.648	0 44 49.96
Sept. 12		5	5	54.06	3.920	50.14
13		5	5	53.76	.934	49.83
Nov. 6		5	5	54.16	4.211	49.95
Means		5				0 44 49.970

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1840.
				h. m. s.	s.	h. m. s.
July 20	38 Andromedæ η	5	5	0 48 43.01	+2.523	0 48 40.49
Sept. 12		5	5	44.18	3.879	40.30
13		5	5	44.41	.895	40.52
Nov. 6		5	5	44.81	4.223	40.59
Means		5				0 48 40.475
Sept. 12	Ap. Sculp. α	5	5	0 50 57.81	+4.234	0 50 53.58
13		5	5	57.74	.251	53.49
Oct. 11		5	5	58.17	.304	53.87
Means		5				0 50 53.647
Nov. 6	101 A. S. C.	6.7	5	0 51 36.52	+4.212	0 51 32.308
Jan. 12	71 Piscium ε	4	5	0 54 38.86	+0 301	0 54 38.56
July 20		4	5	41.28	2.552	38.73
Sept. 12		4.5	5	42.64	3.865	38.77
13		4.5	5	42.52	.881	38.64
Oct. 11		4	5	42.80	4.171	38.63
Nov. 6		4	5	42.71	.224	38.59
Means		4				0 54 38.653
Jan. 12	31 Ceti η	3.4	5	1 00 33.08	+0.485	1 00 32.595
Sept 13	83 Piscium τ	6	5	1 02 55.72	+3.936	1 02 51.78
Oct. 11		6	5	56.28	4.017	52.26
Means		6				1 02 52.023
Jan. 12	85 Piscium φ	6	5	1 05 04.42	+0.211	1 05 04.209
Sept. 13	38 Ceti	6	5	1 06 42.97	+3.882	1 06 39.09
Oct. 11		6	5	43.38	4.203	39.18
Means		6				1 06 39.132
Jan. 12	Ceti	6.7	5	1 08 29.45	+0.577	1 08 28.873
Sept. 13	40 Ceti	6.7	5	1 08 51.53	+3.882	1 08 47.648
Oct. 11	90 Piscium υ	6	5	1 10 45.62	+4.282	1 10 41.338
Sept. 13	91 Piscium l	6	5	1 12 21.37	+3.658	1 12 17.712
Jan. 12	45 Ceti θ^1	3	5	1 16 02.28	+0.589	1 16 01.69
July 20		3	5	03.91	2.426	01.48
Sept. 13		3	5	05.53	3.767	01.76
14		3	5	05.67	.765	01.91
Oct. 11		3	5	05.82	4.167	01.65
Means		3				1 16 01.698

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Jan. 12	47 Ceti	7	5	1 18 58.48	+0.611	1 18 57.87
Oct. 11		6	5	19 01.98	4.255	57.73
Means		6.7				1 18 57.797
Jan. 12	99 Piscium η	4	5	1 22 56.06	+0.416	1 22 55.64
Sept. 13		4	5	59.51	3.848	55.66
14		4	5	59.78	.865	55.91
Oct. 11		4	5	23 00.07	4.229	55.84
Means		4				1 22 55.763
Jan. 12	49 Ceti	7	5	1 26 49.52	+0.676	1 26 48.84
Sept. 13		6	5	52.56	3.888	48.67
14		6	5	52.79	.906	48.88
Means		6				1 26 48.797
Oct. 11	101 Piscium	7	5	1 27 17.87	+4.232	1 27 13.638
Sept. 14	105 Piscium	6	5	1 31 07.45	+3.858	1 31 03.59
Oct. 11		6	5	07.79	4.233	03.56
Means		6				1 31 03.574
Sept. 13	109 Piscium	6.7	5	1 36 15.84	+3.855	1 36 11.98
14		6.7	5	16.26	.874	12.39
Means		6.7				1 36 12.185
Jan. 12	52 Ceti τ	4	5	1 36 38.99	+0.713	1 36 38.28
Oct. 11		3.4	5	42.18	4.123	38.06
Means		3.4				1 36 38.167
Oct. 11	193 A. S. C.	6	5	1 41 23.27	+4.314	1 41 18.956
Sept. 13	Ceti	7	2	1 41 35.60	+3.795	1 41 31.81
14		7	3	35.81	.813	32.00
Means		7				1 41 31.901
Jan. 12	53 Ceti χ^2	6	5	1 41 44.33	+0.719	1 41 43.61
Sept. 13		5	5	47.53	3.795	43.74
14		5	5	47.54	.813	43.73
Means		5				1 41 43.693
Oct. 11	5 Arietis γ	5	5	1 44 49.94	+4.290	1 44 45.650
Jan. 13	6 Arietis β	3	5	1 45 49.28	+0.515	1 45 48.77
Aug. 18		3	5	52.01	3.196	48.84

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Sept. 13	6 Arietis β cont'd.	3	5	1 45 52.80	+3.848	1 45 48.95
14		3	5	52.77	.867	48.99
Means		3				1 45 48.868
Oct. 11	8 Arietis ι	6	5	1 48 41.50	+4.281	1 48 37.219
Aug. 18	9 Arietis λ	5.6	5	1 49 04.58	+3.200	1 49 01.380
Jan. 13	56 Ceti υ^1	6	5	1 49 11.38	+0.846	1 49 10.534
Sept. 14	59 Ceti υ^2	4.5	5	1 52 31.74	+3.809	1 52 27.931
Jan. 12	113 Piscium α	5	5	1 53 47.13	+0.694	1 53 46.44
13		5	5	47.00	.683	46.32
Aug. 18		5.6	5	49.52	3.115	46.42
Means		5				1 53 46.393
Oct. 11	60 Ceti	6	5	1 55 03.71	+4.204	1 54 59.506
Jan. 12	13 Arietis α	3	5	1 58 10.49	+0.598	1 58 09.89
13		3	5	10.59	.586	10.01
Aug. 18		3	5	13.14	3.170	09.97
Sept. 14		3	5	13.89	.876	10.01
Oct. 11		3	5	14.38	4.359	10.02
Means		3				1 58 09.980
Aug. 18	15 Arietis	5	5	2 01 49.34	+3.136	2 01 46.20
Sept. 14		6	5	49.96	.834	46.13
Means		5.6				2 01 46.165
Jan. 12	6 Trianguli ι	5.6	3	2 03 06.62	+0.596	2 03 06.02
13		6	5	06.89	.583	06.31
Oct. 11		5.6	5	10.89	4.475	06.42
12		5.6	5	11.09	.490	06.60
Means		5.6				2 03 06.338
Aug. 18	65 Ceti ξ^1	5	5	2 04 34.70	+3.080	2 04 31.62
Sept. 14		5	5	35.46	.755	31.70
Means		5				2 04 31.662
Aug. 18	22 Arietis θ^1	6	5	2 09 17.32	+3.111	2 09 14.21
Sept. 14		6	5	18.12	.826	14.29
Oct. 11		6	5	18.56	4.326	14.23
12		6	5	18.61	.340	14.27
Means		6				2 09 14.250

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Jan. 12	68 Ceti ο	6.7	5	2 11 16.94	+0.830	2 11 16.11
13		7	5	16.88	.818	16.06
Means		6.7				2 11 16.085
Aug. 18	69 Ceti	6	5	2 13 48.06	+3.009	2 13 45.05
Oct. 11		6	5	49.11	4.166	44.94
12		6	5	49.11	.180	44.93
Means		6				2 13 44.973
Jan. 13	Fornacis χ	6.7	5	2 15 14.10	+0.998	2 15 13.112
Aug. 18	72 Ceti ρ	5.6	5	2 18 16.36	+2.952	2 18 13.41
Oct. 11		5.6	5	17.40	4.127	13.27
12		5.6	5	17.51	.141	13.37
Means		5.6				2 18 13.350
Sept. 14	Trianguli c	6	5	2 18 51.90	+3.932	2 18 47.968
Aug. 18	27 Arietis ψ	6	5	2 22 05.34	+3.050	2 22 02.29
Sept. 14		6	5	06.32	.778	02.54
Oct. 11		6.7	5	07.07	4.302	02.77
12		6.7	5	06.91	.322	02.59
Means		6				2 22 02.547
Sept. 14	77 Ceti e¹	6	5	2 26 52.74	+3.608	2 26 49.13
Oct. 12		6	5	53.16	4.126	49.03
Means		6				2 26 49.088
Jan. 13	78 Ceti ν	5	5	2 27 29.87	+0.864	2 27 29.01
Aug. 18		5	5	32.10	2.959	29.14
Means		5				2 27 29.073
Sept. 14	32 Arietis ν	5.6	5	2 29 48.54	+3.809	2 29 44.73
15		5.6	5	48.43	.836	44.59
Oct. 12		5.6	5	49.12	4.387	44.73
Nov. 9		5.6	5	49.24	.721	44.52
Means		5.6				2 29 44.643
Jan. 13	83 Ceti ε	4.5	5	2 31 50.57	+0.987	2 31 49.583
Oct. 12	34 Arietis μ	6	5	2 33 26.12	+4.360	2 33 21.760
Jan. 13		3	5	2 35 01.93	+0.919	2 35 01.01
Aug. 18		3	5	03.89	2.909	00.98
Sept. 14	86 Ceti γ	3	5	04.56	3.625	00.94

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Sept. 15	86 Ceti γ	3	5	2 35 04.67	+3.648	2 35 01.02
Oct. 12	cont'd.	3	5	05.17	4.166	01.00
Nov. 9		3	5	05.47	.482	00.99
Means		3				2 35 00.988
Aug. 18	39 Arietis b	4	5	2 38 26.83	+3.084	2 38 23.75
Sept. 14		4	5	27.90	.899	24.00
15		5	5	28.09	.926	24.16
Means		4				2 38 23.970
Nov. 9	40 Arietis	6	5	2 39 39.36	+4.690	2 39 34.670
Jan. 13	41 Arietis c	3	5	2 40 35.70	+0.877	2 40 34.82
14		3	5	35.88	.866	35.03
Oct. 12		3.4	5	39.74	4.389	35.35
Means		3				2 40 35.057
Sept. 14	Fornacis υ	7.8	5	2 42 18.31	+3.515	2 42 14.795
Aug. 18	2 Eridani τ^2	4.5	5	2 43 49.83	+2.740	2 43 47.09
Nov. 9		5	5	51.53	4.355	47.17
Means		4.5				2 43 47.132
Oct. 12	312 A. S. C.	7	5	2 44 22.12	+4.307	2 44 17.813
Jan. 13	45 Arietis ρ^2	6	5	2 46 50.80	+0.938	2 46 49.86
14		6	5	50.60	.926	49.67
Aug. 18		6	5	52.65	2.955	49.70
Sept. 15		6	5	53.54	3.751	49.79
Means		6				2 46 49.755
Nov. 9	46 Arietis ρ^3	6	5	2 47 29.73	+4.708	2 47 25.022
Jan. 13	48 Arietis ε	5	5	2 50 05.44	+0.953	2 50 04.49
14		5	5	05.58	.942	04.64
Aug. 18		5	5	07.35	2.968	04.38
Sept. 14		5	5	08.23	3.757	04.47
15		5	5	08.34	.784	04.56
Oct. 12		5	3	09.13	4.384	04.75
13		5	5	09.08	.403	04.68
Nov. 9		5	5	09.35	.780	04.57
Means		5				2 50 04.568
Jan. 13		2.3	5	2 53 56.37	+1.021	2 53 55.35
14		2.3	5	56.36	.011	55.35
Aug. 18	92 Ceti α	2.3	5	58.19	2.816	55.37

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Sept. 14	92 Ceti α cont'd.	2.3	5	2 53 58.80	+3.558	2 53 55.24
15		2.3	5	58.93	.584	55.35
Oct. 12		2.3	5	59.50	4.149	55.35
13		2.3	5	59.44	.165	55.28
Nov. 9		2.3	5	59.95	.515	55.44
Means		2.3				2 53 55.341
Jan. 13	53 Arietis	7	5	2 58 26.75	+1.012	2 58 25.74
Aug. 18		6	5	28.59	2.904	25.69
Sept. 15		6	5	29.68	3.715	25.97
Oct. 12		6.7	5	30.36	4.324	26.04
13		6.7	5	30.21	.342	25.87
Nov. 9		6	5	30.51	.734	25.78
Means		6.7				2 58 25.850
Jan. 13	57 Arietis δ	4	5	3 02 30.57	+1.038	3 02 29.53
14		4	5	30.60	.027	29.57
Aug. 18		4	5	32.33	2.904	29.43
Sept. 15		4	5	33.27	3.729	29.54
Oct. 12		4	5	33.90	4.355	29.55
13		4	5	33.82	.373	29.45
Nov. 9		4	5	34.20	.782	29.42
Dec. 7		4	5	34.20	.958	29.24
Means		4				3 02 29.466
Jan. 13	12 Eridani	4	5	3 05 18.03	+1.309	3 05 16.721
Oct. 12	58 Arietis ζ	4.5	5	3 05 47.42	+4.377	3 05 43.04
13		4.5	5	47.35	.398	42.95
Nov. 9		5	5	47.96	.819	43.14
Dec. 7		5	5	47.68	5.005	42.68
Means		4.5				3 05 42.953
Sept. 15	13 Eridani ζ	4	5	3 08 07.52	+3.420	3 08 04.100
Jan. 13	95 Ceti k^2	6	5	3 10 12.64	+1.128	3 10 11.51
Feb. 11		5.6	5	12.25	0.765	11.49
Oct. 12		5.6	5	15.46	4.065	11.40
13		5.6	5	15.26	.084	11.18
Nov. 9		5.6	5	15.96	.468	11.50
Dec. 7		5.6	5	16.02	.629	11.39
Means		5.6				3 10 11.412
Sept. 15	15 Eridani	5.6	5	3 11 21.43	+3.317	3 11 18.113
Jan. 13	64 Arietis g	6	5	3 14 53.38	+1.097	3 14 52.28
Sept. 15		5.6	2	56.56	3.804	52.76

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Sept. 16	64 Arietis cont'd. g	5.6	5	3 14 56.21	+3.804	3 14 52.41
Oct. 12		5.6	5	56.92	4.451	52.47
13		5.6	5	56.96	.471	52.49
Nov. 9		6	5	57.28	.932	52.35
Dec. 7		5.6	5	57.40	5.152	52.25
Means		5.6				3 14 52.430
Feb. 11	1 Tauri o	4.5	5	3 16 13.49	+0.778	3 16 12.712
Sept. 16	2 Tauri ξ	4	5	3 18 33.95	+3.574	3 18 30.38
Oct. 13		4	5	34.35	4.196	30.15
Nov. 9		4	5	35.02	.622	30.40
Dec. 10		4	5	34.98	.824	30.16
Means		4				3 18 30.273
Feb. 11	4 Tauri s	5	5	3 21 41.15	+0.807	3 21 40.343
Sept. 15	17 Eridani	4.5	5	3 22 44.65	+3.374	3 22 41 28
16		4.5	5	44.34	.399	40.94
Oct. 13		4.5	5	44.94	4.008	40.93
Dec. 7		4.5	5	45.20	.602	40.60
Means		4.5				3 22 40.938
Feb. 11	7 Tauri	6	5	3 24 59.60	+0.808	3 24 58.792
Sept. 15	19 Eridani τ^3	4	5	3 26 46.48	+3.214	3 26 43.27
16		4	5	46.54	.241	43.30
Oct. 13		4	5	47.02	.867	43.15
Dec. 7		4	5	47.68	4.423	43.26
Means		4				3 26 43.245
Feb. 11	10 Tauri E	5	5	3 28 43.54	+0.865	3 28 42.675
Nov. 9	20 Eridani F	6	5	3 29 04.59	+4.295	3 29 00.295
Sept. 15	21 Eridani	6	5	3 31 10.68	+3.326	3 31 07.35
16		6	5	10.78	.352	07.43
Oct. 13		6	5	11,17	.975	07.20
Dec. 7		6	5	11.96	4.612	07.35
Means		6				3 31 07.332
Feb. 11	12 Tauri	6	5	3 31 32.30	+0.878	3 31 31.422
Feb. 11	16 (Pleiadum) g	5.6	1	3 35 18.64	+0.886	3 35 17.71
Sept. 15		5.6	4	22.46	3.706	18.75
16		5.6	4	22.25	.737	18.51
Nov. 10		5.6	4	23.68	4.858	18.82
Means		5.6				3 35 18.448

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	*s.*	*h. m. s.*
Feb. 11	17 (Pleiadum) *b*	4.5	5	3 35 24.14	+0.887	3 35 23.25
Sept. 15		4.5	5	26.73	3.708	23.02
16		4.5	5	27.07	.738	23.33
Oct. 13		4.5	5	27.75	4.448	23.30
Nov. 9		4.5	5	28.27	.964	23.31
10		4.5	5	28.13	.979	23.15
Dec. 7		4.5	5	28.42	5.245	23 18
Means		4.5				3 35 23.220
Feb. 11	25 Tauri *η*	3	5	3 38 00.14	+0.944	3 37 59.20
Sept. 15		3	5	02.83	3.706	59.12
16		3	5	02.93	.737	59.19
Oct. 13		3	5	03.69	4.452	59.14
Nov. 9		3	5	04.07	.873	59.20
10		3	5	04.10	.858	59.25
Dec. 7		3	5	04.32	5.225	59.10
Means		3				3 37 59.171
Feb. 11	27 (Pleiadum) *f*	5	5	3 39 40.36	+0.918	3 39 39.44
Dec. 7		5	5	44.74	5.265	39.48
Means		5				3 39 39.460
Feb. 11	28 (Pleiadum) *h*	5.6	1	3 39 41.33	+0.915	3 39 40 415
Sept. 16	426 A. S. C.	5	5	3 42 44.61	+2.978	3 42 41.63
Oct. 13		5	5	45.37	3.697	41.67
Nov. 9		5	5	46.37	4.153	42.22
10		5	5	46.38	.166	42.21
Means		5				3 42 41.933
Dec. 7	Eridani *g*	5	5	3 43 32.20	+4.301	3 43 27.899
Feb. 11	31 Tauri u^2	6	5	3 43 29.61	+0.946	3 43 28.664
Sept. 16	32 Eridani	5.6	5	3 46 18.90	+3.302	3 46 15.60
Oct. 13		5	5	19.53	.956	15.57
Means		5				3 46 15.586
Feb. 11	32 Tauri	6	5	3 47 26.53	+0.974	3 47 25.556
Nov. 9	Eridani *i*	5.6	5	3 47 37.89	+4.141	3 47 33.75
10		5.6	5	37.80	.152	33.65
Dec. 7		5	5	37.17	.307	32.86
Means		5.6				3 47 33.420

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Sept. 16	31 Eridani γ^1	2.3	5	3 50 37.16	+3.160	3 50 34.00
Oct. 13		2.3	5	37.83	.820	34.01
Nov. 10		2.3	5	38.37	4.300	34.07
Means		2.3				3 50 34.027
Feb. 11	441 A. S. C.	6.7	5	3 51 37.13	+1.000	3 51 36.130
Nov. 9	35 Tauri λ	4	5	3 51 54.28	+4.698	3 51 49.582
Sept. 16	38 Tauri ν	5	5	3 54 42.39	+3.383	3 54 39.007
Feb. 11	37 Tauri A^1	5	5	3 55 15.85	+1.030	3 55 14.82
Nov. 9		5	5	19.76	4.939	14.82
10		5	5	19.77	.956	14.81
Means		5				3 55 14.816
Feb. 11	39 Tauri A^2	7	1	3 55 53.53	+1.035	3 55 52.495
Dec. 7	41 Tauri	6	5	3 56 53.92	+5.467	3 56 48.453
Sept. 16	454 A. S. C.	6.7	5	3 58 53.79	+3 539	3 58 50.451
Nov. 10	Eridani A	6	5	3 59 06.24	+4.149	3 59 02.091
Jan. 15	43 Tauri ω^1	6.7	5	3 59 52.46	+1.376	3 59 51.08
Feb 11		6	5	52.26	.059	51.20
Oct. 13		6	5	55.63	4.310	51.32
Means		6				3 59 51.200
Dec. 3	44 Tauri P	6	5	4 01 11.67	+5.422	4 01 06.248
Sept. 16	37 Eridani	5.6	5	4 02 37.59	+3.167	4 02 34.423
Feb. 11	463 A. S. C.	7	5	4 03 23.72	+1.191	4 03 22.529
Jan. 15	38 Eridani o	5.6	5	4 04 04.79	+1.386	4 04 03.40
Oct. 13		4.5	5	07.21	3.840	03.37
Nov. 10		4.5	5	07.98	4.365	03.61
Means		4.5				4 04 03.460
Dec. 7	47 Tauri	5.6	5	4 05 19.49	+4.964	4 05 14.526
Jan. 15	49 Tauri μ	5.6	5	4 06 52.46	+1.386	4 06 51.07
Sept. 16		5	5	54.34	3 367	50.97
Means		5				4 06 51.023
Feb. 11	50 Tauri ω^2	5.6	3	4 07 54.90	+1.099	4 07 53.801

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Nov. 10	40 Eridani *d*	5	5	4 07 58.90	+4.195	4 07 54.705
Oct. 13	Horologii α	5	5	4 08 46.02	+3.453	4 08 42.567
Feb. 11	54 Tauri γ	3.4	5	4 10 42.92	+1.122	4 10 41.80
Sept. 16		3.4	5	45.26	3.462	41.80
Dec. 7		3.4	5	46.86	5.141	41.72
8		3.4	5	46.88	.147	41.73
Means		3.4	5			4 10 41.763
Jan. 15	41 Eridani X	3.4	5	4 11 52.11	+1.611	4 11 50.499
Oct. 14	59 Tauri χ	6	5	4 12 55.61	+4.469	4 12 51.14
Nov. 10		6	1	56.36	5.079	51.28
Means		6				4 12 51.211
Feb. 11	62 Tauri	7	5	4 14 22.70	+1.174	4 14 21.526
Jan. 15	69 Tauri υ^1	5	5	4 16 46.06	+1.490	4 16 44.57
Oct. 13		5	5	49.10	4.385	44.71
14		5.6	5	48.77	.417	44.35
Nov. 10		5	5	49.63	.997	44.63
Dec. 7		5	5	50.03	5.378	44.65
8		5	5	49 99	.388	44.60
Means		5				4 16 44.585
Feb. 11	74 Tauri ε	4	5	4 19 18.18	+1.189	4 19 16.991
Oct. 13	44 Eridani k^1	5.6	5	4 20 19.98	+3.901	4 20 16.08
14		6	5	19.77	.926	15.84
Nov. 10		6	5	20.74	4.479	16.26
Means		6				4 20 16.060
Dec. 7	80 Tauri	6	5	4 21 06.58	+5.169	4 21 01.411
Feb. 11	85 Tauri	6.7	5	4 22 44.97	+1.200	4 22 43.770
Oct. 13	45 Eridani k^2	5.6	5	4 23 45.47	+3.867	4 23 41.60
14		5.6	5	45.63	.890	41.74
Nov. 10		5.6	5	46.29	4.448	41.84
Means		5.6				4 23 41.727
Jan. 13	87 Tauri α	1	5	4 26 46.20	+1.525	4 26 44.68
15		1	5	46.35	.511	44.84
Feb. 11		1	5	46.01	.231	44.78
Sept. 16		1	5	48.14	3.418	44.72
Oct. 13		1	5	48.96	4.165	44.80

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Oct. 14	87 Tauri α cont'd.	1	5	4 26 48.97	+4.208	4 26 44.76
Nov. 10		1	5	49.50	.815	44.69
Dec. 7		1	5	50.08	5.216	44.86
8		1	5	49.96	.223	44.74
Means		1				4 26 44.763
Jan. 15	53 Eridani	5	5	4 30 52.20	+1.517	4 30 50.683
Sept. 16	94 Tauri τ	5	5	4 32 42.51	+3.520	4 32 38.99
Oct. 13		5	5	43.46	4.327	39.13
14		5	5	43.29	.354	38.94
Dec. 7		5	5	44.69	5.437	39.25
8		5	5	44.38	.447	38.93
Means		5				4 32 39.048
Feb. 11	547 A. S. C.	6	5	4 35 35.41	+1.264	4 35 34.146
Oct. 14	Cœli Sculp. β	5	5	4 36 27 88	+3.297	4 36 24.58
Nov. 10		5	5	28.33	.897	24.43
Means		5				4 36 24.508
Jan. 15	57 Eridani μ	5	5	4 37 31.80	+1.516	4 37 30.284
Nov. 10	58 Eridani	6	5	4 40 29.56	+4.130	4 40 25.430
Feb. 11	96 Tauri K	6.7	5	4 40 36.53	+1.315	4 40 35.22
Oct. 14		6	5	39.48	4.154	35.33
Means		6				4 40 35.270
Jan. 15	3 Orionis τ	4.5	5	4 42 42.80	+1.546	4 42 41.254
Feb. 11	4 Orionis o^1	5	5	4 43 30.61	+1.326	4 43 29.284
Oct. 14	61 Eridani ω	5	5	4 45 05.82	+3.712	4 45 02.11
Nov. 10		5	5	06.58	4.310	02.27
Dec. 8		5	5	07.05	.707	02.34
Means		5				4 45 02.240
Sept. 16	5 Orionis	6	5	4 45 05.34	+3.083	4 45 02 257
Jan. 15	9 Orionis o^2	5	5	4 47 24.43	+1.596	4 47 22.834
Feb. 11	572 A. S. C.	6.7	5	4 48 08.06	+1.414	4 48 06.646
Sept. 16	62 Eridani b	6	5	4 48 34.39	+2 901	4 48 31.489
Nov. 10	10 Orionis s	5.6	5	4 50 20.16	+4.439	4 50 15.721

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Oct. 14	63 Eridani	5	5	4 52 19.77	+3.597	4 52 16.173
Feb. 11	102 Tauri ι	4.5	5	4 53 33.74	+1.433	4 53 32.31
Sept. 16		4.5	5	35.59	3.406	32.19
Nov. 10		4.5	5	37.33	4.955	32.38
Means		4.5				4 53 32.293
Feb. 11	104 Tauri m	5	3	4 58 01.35	+1.453	4 57 59.90
Nov. 10		5	5	04.79	4.907	59.88
Means		5				4 57 59.890
Jan. 15	2 Leporis ε	3.4	5	4 58 42.72	+1.650	4 58 41.070
Jan. 15	69 Eridani λ	6	5	5 01 30.88	+1.606	5 01 29.27
Feb. 4		5	5	31.04	.435	29.60
12		4	5	30.75	.329	29.42
25		4	5	30.72	.129	29.59
Nov. 10		4.5	5	33.86	4.206	29.65
Means		4.5				5 01 29.506
Feb. 25	617 A. S. C.	5	3	5 05 52.82	+1.152	5 05 51.668
Jan. 15	19 Orionis β	1	5	5 06 52.76	+1.622	5 06 51.15
Feb. 2		1	5	52.59	.484	51.11
4		1	5	52.62	.460	51.16
11		1	5	52.34	.374	50.97
12		1	5	52.34	.360	50.98
25		1	5	52.22	.163	51.06
26		1	5	52.00	.146	50.85
Mar. 11		1	5	52.08	0.908	51.17
Oct. 14		1	5	54.54	3.567	50.97
Nov. 10		1	5	55.25	4.198	51.05
Means		1				5 06 51.047
Feb. 25	Columbæ	7	3	5 10 03.59	+1.091	5 10 02.499
Oct. 14	21 Orionis	6	5	5 10 54.38	+3.731	5 10 50.65
Nov. 10		6	5	55.11	.643	50.47
Means		6				5 10 50.558
Feb. 4	Columbæ ο	5	5	5 11 44.50	+1.526	5 11 42.97
11		5	5	44.39	.394	43.00
12		5	5	44.50	.374	43.13
25		5	5	44.31	.091	43.22
26		5	5	44.05	.069	42.98
Means		5				5 11 43.060

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	*s.*	*h. m. s.*
Oct. 14	22 Orionis *o*	5.6	5	5 13 39.55	+3.683	5 13 35.87
15		5.6	5	39.32	.707	35.61
Means		5.6				5 13 35.740
Jan. 15	112 Tauri β	2	5	5 16 12.90	+1.881	5 16 11.02
16		2	5	12.83	.873	10.96
20		2	5	12.86	.856	11.00
25		2	5	12.88	.835	11.05
Feb. 2		2	5	12.49	.769	10.72
4		2	3	12.53	.745	10.79
11		2	5	12.61	.659	10.95
12		2	5	12.52	.645	10.88
25		2	5	12.38	.448	10.93
26		2	5	12.59	.431	11.16
Mar. 11		2	5	12.25	.183	11.07
Oct. 14		2	5	15.44	4.417	11.02
15		2	5	15.44	.449	10.99
Nov. 10		2	5	16.21	5.193	11.02
Dec. 8		2	5	16.82	.791	11.03
9		2	5	16.88	.805	11.08
Means		2				5 16 10.979
Feb. 2	9 Leporis β	4	5	5 21 24.65	+1.541	5 21 23.11
4		4	5	25.15	.517	23.63
11		4	5	24.81	.416	23.49
12		4	3	24.96	.400	23.56
25		4	5	24.72	.180	23.54
26		4	5	24.56	.161	23.40
Mar. 11		4	5	24.22	0.892	23.33
Oct. 14		4	5	26.86	3.255	23.60
15		4	5	26.64	.279	23.36
Dec. 8		4	5	27.99	4.847	23.14
Means		4				5 21 23.416
Jan. 15	34 Orionis δ	2	5	5 23 51.59	+1.678	5 23 49.91
16		2	5	51.76	.676	50.08
20		2	5	51.68	.668	50.01
25		2	5	51.80	.638	50.16
Feb. 2		2	5	51.73	.576	50.15
4		2	5	51.74	.556	50.18
11		2	5	51.59	.483	50.11
12		2	5	51.49	.470	50.02
25		2	5	51.33	.286	50.04
26		2	5	51.26	.270	49.99
Mar. 11		2	5	51.09	.046	50.04
Oct. 14		2	5	53.67	3.642	50.03
15		2	5	53.46	.670	49.79
Means		2				5 23 50.039

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	*s.*	*h. m. s.*
Dec. 8	11 Leporis *α*	3.4	5	5 25 45.08	+4.440	5 25 40.64
9		3.4	5	45.11	.451	40.66
Means		3.4				5 25 40.650
Jan. 25	46 Orionis *ε*	2.3	5	5 28 07.26	+1.652	5 28 05.61
Feb. 2		2.3	5	07.33	.590	05.74
4		2.3	5	07.42	.570	05.85
11		2.3	5	07.32	.497	05.82
12		2.3	5	07.22	.484	05.74
25		2.3	5	07.13	.306	05.82
26		2.3	5	07.07	.290	05.78
Mar. 11		2.3	5	06.91	.060	05.85
Dec. 8		2.3	5	10.65	4.804	05.85
9		2.3	5	10.61	.816	05.79
Means		2.3				5 28 05.785
Jan. 15	26 Aurigæ *l*	6	5	5 28 23.91	+1.973	5 28 21.94
16		6	5	24.08	.971	22.11
20		5.6	5	23.69	.963	21.73
Oct. 14		5	2	26.78	4.434	22.35
15		6	5	26.52	.467	22.05
Means		5.6				5 28 22.036
Jan. 16	Columbæ *α*	2	5	5 33 53.38	+1.827	5 33 51.55
20		2	5	53.34	.799	51.54
25		2	5	53.35	.740	51.61
Feb. 2		2	5	52.91	.630	51.28
4		2	5	53.04	.598	51.44
11		2	5	53.02	.482	51.54
12		2	5	53.20	.462	51.74
24		2	5	52.74	.218	51.52
25		2	5	52.73	.197	51.53
26		2	5	52.71	.176	51.53
Mar. 11		2	5	52.41	0.852	51.56
Oct 14		2	5	54.66	2.902	51.76
15		2	5	54.51	.932	51.58
Means		2				5 33 51.552
Feb. 2	13 Leporis *γ*	4	5	5 37 49.14	+1.601	5 37 47.54
4		4	5	49.42	.577	47.84
Means		4				5 37 47.690
Jan. 16	130 Tauri N	7	5	5 38 08.32	+1.842	5 38 06.478
Oct. 15	131 Tauri O	6	5	5 38 10.50	+3.943	5 38 06.557
Feb. 12	Columbæ *μ*	6	5	5 40 04.99	+1.481	5 40 03.51

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Feb. 24	Columbæ μ cont'd.	6	5	5 40 04.45	+1.247	5 40 03.20
25		5	5	04.50	.226	03.27
26		5	5	04.49	.204	03.29
Mar. 11		5	5	04.18	0.891	03.29
Means		5				5 40 03.312
Jan. 16	136 Tauri C	5	5	5 43 18.53	+1.995	5 43 16.54
Feb. 2		5	5	18.73	.921	16.81
4		5	5	18.28	.902	16.38
12		5	5	18.22	.803	16.42
25		5	5	17.99	.630	16.36
26		5	5	18.37	.614	16.76
Mar. 11		5	5	18.03	.368	16.66
Oct. 15		5	5	21.11	4.311	16.80
Nov. 12		4.5	5	21.59	5.166	16.42
Dec. 8		4.5	5	22.37	.773	16.60
9		4.5	5	22.22	.790	16.43
Means		5				5 43 16.562
Jan. 16	58 Orionis α	1	5	5 46 32.54	+1.780	5 46 30.76
Feb. 2		1	5	32.72	.714	31.00
4		1	5	32.33	.698	30.63
12		1	5	32.37	.526	30.84
25		1	5	32.28	.455	30.83
26		1	5	32.34	.440	30.90
Mar. 11		1	5	32.04	.214	30 83
Oct. 15		1	5	34.32	3.733	30.59
Nov. 12		1	5	35.18	4.490	30.69
Dec. 8		1	5	35.65	5.028	30.62
9		1	5	35.61	.045	30.57
Means		1				5 46 30.751
Oct. 15	59 Orionis	6	5	5 50 09.61	+3.588	5 50 06.022
Jan. 16	60 Orionis B	6	5	5 50 37.87	+1.761	5 50 36.11
Nov. 12		6	5	40.42	4.237	36.18
Means		6				5 50 36.146
Feb. 12	Columbæ γ	5	5	5 51 53.63	+1.533	5 51 52.10
Mar. 11		5	5	52.95	0.932	52.03
Means		5				5 51 52.062
Oct. 15	3 Monocerotis	5.6	5	5 54 22.10	+3.296	5 54 18.80
Nov. 12		5.6	5	23.05	4.039	19.01
Means		5.6				5 54 18.907

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Jan. 16	62 Orionis χ^3	5	5	5 54 27.01	+1.931	5 54 25.079
Feb. 12	66 Orionis C	6	5	5 56 32.86	+1.646	5 56 31.21
Mar. 11		6	5	32.50	.247	31.25
Means		6				5 56 31.233
Oct. 15	67 Orionis ν	4.5	5	5 58 30.07	+3.865	5 58 26.20
Nov. 12		4.5	5	30.97	4.655	26.31
Means		4.5				5 58 26.260
Jan. 16	18 Leporis θ	5	5	5 58 56.74	+1.757	5 58 54.983
Feb. 12	759 A. S. C.	6.7	5	5 59 55.41	+1.844	5 59 53.566
Mar. 11	19 Leporis τ	6	5	6 00 45.15	+1.089	6 00 44.061
Oct. 15	Columbæ θ	5	5	6 02 05.11	+2.632	6 02 02.48
Nov. 12		5	5	06.54	3.456	03.08
Means		5				6 02 02.781
Jan. 16	44 Aurigæ κ	4	5	6 05 13.11	+2.123	6 05 10.99
Feb. 12		5	5	13.06	1.990	11.07
Mar. 11		4	5	12.83	.557	11.27
Nov. 12		4	5	16.14	5.195	10.95
Means		4				6 05 11.069
Oct. 15	72 Orionis f^2	6	5	6 06 15.77	+3.837	6 06 11.933
Feb. 12	75 Orionis l	6	5	6 08 19.10	+1.749	6 08 17.35
Mar. 11		6	5	18.80	.365	17.34
Means		6				6 08 17.343
Nov. 12	Geminorum	7	5	6 09 14.40	+4.890	6 09 09.510
Jan. 16	13 Geminorum μ	3	5	6 13 18.82	+2.028	6 13 16.79
Feb. 12		3	5	18.84	1.975	16.87
Mar. 11		3	5	18.41	.533	16.88
Oct. 15		3	5	21.26	4.027	17.23
Nov. 12		3	5	21.71	.887	16.82
Means		3				6 13 16.918
Mar. 11	3 Canis Maj. λ	4	3	6 16 17.13	+1.052	6 16 16.078
Jan. 16	48 Aurigæ z	6	5	6 18 18.92	+2.195	6 18 16.73
Oct. 15		6	5	21.64	4.262	17.38
Nov. 12		6	5	22.15	5.201	16.95
Means		6				6 18 17.020

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	*s.*	*h. m. s.*
Jan. 16	Canis Maj. D^1	5	5	6 22 16.44	+1.943	6 22 14.50
Oct. 15		5	5	16.96	2.671	14.29
Nov. 12		5	5	18.26	3.502	14.76
Means		5				6 22 14.517
Mar. 11	49 Aurigæ *c*	6	5	6 25 09.28	+1.685	6 25 07.595
Oct. 15	14 Monocerotis *g*	6.7	5	6 26 10.20	+3.620	6 26 06.580
Nov. 12	24 Geminorum γ	3	5	6 28 32.66	+4.625	6 28 28.035
Jan. 16	7 Canis Maj. ν^2	5	5	6 29 44.02	+1.809	6 29 42.21
Mar. 11		5	5	43.37	.231	42.14
Means		5				6 29 42.175
Oct. 15	8 Canis Maj. ν^3	5.6	5	6 30 54.17	+2.915	6 30 51.25
Dec. 10		5.6	5	55.71	4.354	51.36
Means		5.6				6 30 51.305
Jan. 16	27 Geminorum ϵ	3	5	6 34 07.68	+2.139	6 34 05.54
Mar. 11		3	5	07.07	1.705	05.37
Oct. 15		3	5	09.38	4.000	05.38
Dec. 10		3	5	10.92	5.677	05.24
Means		3				6 34 05.383
Mar. 11	9 Canis Maj. α	1	5	6 38 06.90	+1.292	6 38 05.61
27		1	5	06.90	0.998	05.90
Nov. 12		1	5	09.60	3.694	05.91
Dec. 10		1	5	10.27	4.840	05.93
Means		1				6 38 05.838
Dec. 10	36 Geminorum *d*	6.7	5	6 42 03.12	+5.494	6 41 57.626
Mar. 11	13 Canis Maj. κ^2	4	5	6 43 53.21	+1.192	6 43 52.018
Nov. 12	37 Geminorum	6	5	6 45 32.95	+4.883	6 45 28.067
Dec. 10	38 Geminorum e^1	5.6	5	6 45 42.22	+5.186	6 45 37.034
Mar. 11	17 Canis Maj. π^2	6	5	6 48 09.41	+1.309	6 48 08.101
Dec. 10	18 Canis Maj. μ	5.6	5	6 48 51.18	+4.412	6 48 46.768
Mar. 9	21 Canis Maj. ϵ	2.3	5	6 52 21.82	+1.298	6 52 20.52
11		2.3	5	21.65	.264	20.39

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Mar. 27	21 Canis Maj. ε	2.3	5	6 52 21.33	+0.938	6 52 20.39
April 8	cont'd.	2.3	5	21.11	.686	20.42
Dec. 10		2.3	5	24.57	4.060	20.51
Means		2.3				6 52 20.446
Dec. 10	43 Ceminorum ζ	4	5	6 54 42.47	+5.444	6 54 37.026
Mar. 9	23 Canis Maj. γ	4	5	6 56 32.38	+1.420	6 56 30.96
11		4	5	32.40	.386	31.01
27		4	5	32.22	.105	31.12
Nov. 12		4	5	34.92	3.662	31.26
Means		4				6 56 31.088
Dec. 10	45 Geminorum o	6	5	6 59 16 76	+5.255	6 59 11.505
Mar. 9	46 Geminorum τ	5	5	7 00 58.97	+2.009	7 00 56.96
11		5	5	59.28	1.980	57.30
27		5	5	58.73	.693	57.04
Nov. 12		5.6	5	01 02.07	5.017	57.05
Means		5				7 00 57.088
April 8	25 Canis Maj. δ	3.4	5	7 01 53.82	+0.765	7 01 53.055
Mar. 9	22 Monocerotis m	4.5	5	7 03 43.08	+1.589	7 03 41.49
27		4.5	5	42.76	.308	41.45
Dec. 10		4.5	5	46.29	4.725	41.56
Means		4.5				7 03 41.500
Nov. 13	26 Canis Maj.	6	5	7 05 43.00	+3.402	7 05 39.598
Mar. 9	27 Canis Maj. e^1	4.5	5	7 07 45.32	+1.379	7 07 43.94
Dec. 10		4.5	5	48.26	4.078	44.18
Means		4.5				7 07 44.061
Jan. 18	55 Geminorum δ	3.4	5	7 10 35 85	+2.170	7 10 33.68
Mar. 9		3.4	5	35.81	1.922	33 89
27		3.4	5	35.44	.642	33.80
Nov. 12		3.4	5	38.46	4.636	33.82
13		3.4	5	38.53	.668	33.86
Dec. 10		3.4	5	39.16	5.510	33.65
Means		3.4				7 10 33.788
Jan. 18	57 Geminorum A	6	5	7 13 45.32	+2.009	7 13 43.311
Nov. 13	59 Geminorum	6.7	5	7 14 40.67	+4.871	7 14 35.80
Dec. 10		6.7	5	41.53	5.702	35.83
Means		6.7				7 14 35.815

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Mar. 9	60 Geminorum ι	4	5	7 15 49.17	+2.060	7 15 47.07
27		4	5	48.75	1.757	46.99
April 8		4	5	48.63	.546	47.08
Means		4				7 15 47.047
Jan. 18	3 Canis Min. β	3	5	7 18 30.38	+1.989	7 18 28.39
Nov. 13		3	5	32.41	4.184	28.23
Dec. 10		3	5	33.13	.945	28.19
Means		3				7 18 28.270
Mar. 9	6 Canis Min. ο	5.6	5	7 20 55.16	+1.853	7 20 53.31
27		5.6	5	54.84	.555	53.29
Means		5.6				7 20 53.300
Nov. 13	924 A. S. C.	6	5	7 22 41.51	+3.238	7 21 38.272
Dec. 10	7 Canis Min. δ^1	6	5	7 23 51.90	+4.737	7 23 47.163
Jan. 18	68 Geminorum k	6	5	7 24 30.54	+2.094	7 24 28.446
Mar. 9	69 Geminorum υ	5	5	7 26 05.57	+2.107	7 26 03.46
27		5	5	05 35	1.815	03.54
April 3		5	5	05.12	.692	03.43
4		5	5	05.15	.674	03.48
Nov. 13		5	5	08.19	4.782	03.41
Means		5				7 26 03.464
Jan. 18	10 Canis Min. α	1.2	5	7 30 57.46	+1.961	7 30 55.50
Mar. 9		1.2	5	57.00	.777	55.22
13		1.2	5	57.28	.723	55.56
27		1.2	5	56 80	.521	55.28
April 3		1.2	5	56 81	.413	55.40
4		1.2	5	56.86	.394	55.47
8		1.2	5	56.62	.333	55.29
Nov. 13		1.2	5	59.39	4.011	55.38
Dec. 10		1.2	5	31 00.11	.767	55.34
11		1.2	5	00.10	.791	55.31
Means		1.2				7 30 55.375
Jan. 18		2	5	7 35 33.40	+2.341	7 35 31.06
Mar. 9		2	5	33.17	.183	30.99
13		2	5	33.18	.125	31.06
27		2	5	33.09	1.895	31.20
April 3		2	5	32.89	.776	31.11
4	78 Geminorum β	2	5	32.86	.759	31.10

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h m. s.
April 8	78 Geminorum β cont'd.	2	5	7 35 32.79	+1.691	7 35 31.10
Nov. 13		2	5	35.79	4.732	31.06
Dec. 10		2	5	36.71	5.711	31.00
11		2	5	36.76	.767	30.99
Means		2				7 35 31.067
Mar. 13	Arg. in pup. c	5	5	7 39 35.19	+1.369	7 39 33.82
27		4	5	34.28	.058	33.22
April 3		4	5	34.48	0.893	33.59
4		4	5	34.59	.870	33.72
Nov. 13		4	5	36.29	2.896	33.39
Dec. 10		4	5	36.29	3.703	33.59
Means		4				7 39 33.555
April 3	7 Argus ξ	4	3	7 42 35.20	+1.102	7 42 34.10
4		4	5	35.19	.084	34.11
Means		4				7 42 34.102
Jan. 18	83 Geminorum φ	5.6	5	7 43 44.17	+2.325	7 43 41.85
Mar. 13		5	5	43.89	.154	41.74
Nov. 13		5	5	46.70	4.675	42.02
Dec. 10		5	5	47.43	5.553	41.88
Means		5				7 43 41.873
Jan. 18	Arg. in pup. b	5	5	7 47 01.36	+1.910	7 46 59.450
Mar. 13	1 Cancri	6	5	7 47 56.12	+1.970	7 47 54.15
April 3		6	5	55.83	.658	54.17
4		6	5	55.86	.643	54.22
Nov. 13		6	5	58.40	4.272	54.13
Means		6				7 47 54.165
Jan. 18	2 Cancri ω^1	6	5	7 51 16.89	+2.300	7 51 14.59
Feb. 15		6	5	16.85	.413	14.44
Mar. 31		6	5	16.35	1.887	14.46
April 3		6	5	16.44	.837	14.60
4		6	5	16.39	.820	14.57
Means		6				7 51 14.532
Nov. 13	3 Cancri	6	5	7 51 41.04	+4.300	7 51 36.740
Feb. 15	6 Cancri	5.6	5	7 53 43.18	+2.483	7 53 40.70
Mar. 31		5.6	5	42.92	1.950	40.97
April 3		5.6	5	42.87	.899	40.97
4		5.6	5	42.92	.881	41.04
Means		5.6				7 53 40.920

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Mar. 13	8 Cancri	6	5	7 56 11.58	+1.967	7 56 09.613
Jan. 18	9 Cancri μ^1	6	5	7 56 51.49	+2.241	7 56 49.249
Jan. 18	15 Argus	3.4	5	8 00 45.80	+1.815	8 00 43.99
Feb. 15		3.4	5	45.91	.855	44.06
Mar. 13		3.4	5	45.59	.573	44.02
31		3.4	5	45.34	.265	44.08
April 3		3.4	5	45.18	.211	43.97
4		3.4	5	45.15	.193	43.96
Nov. 13		3.4	5	47.20	3.159	44.04
Means		3.4				8 00 44.017
Feb. 19	19 Argus	6	5	8 03 47.88	+2.921	8 03 44.96
Mar. 31		6	5	47.40	1.412	44.99
Means		6				8 03 44.973
Jan. 18	20 Argus	5	5	8 06 00.77	+1.824	8 05 58.95
Mar. 13		5.6	5	00.42	.663	58.76
Nov. 13		5	5	02.27	3.352	58.92
Means		5				8 05 58.877
Feb. 15	17 Cancri β	4	5	8 07 52.29	+2.629	8 07 49.66
Mar. 31		4	5	51.84	1.720	50.12
Means		4				8 07 49.890
Mar. 13	18 Cancri χ	6	5	8 10 22.47	+2.317	8 10 20.153
Jan. 18	19 Cancri λ	6	5	8 11 03.25	+2.275	8 11 00.98
Nov. 13		6	5	05.38	4.405	00.98
Means		6				8 11 00.980
Feb. 15	Arg. in pup. q	4.5	5	8 12 36.50	+1.875	8 12 34.63
Mar. 31		4.5	5	35.79	.171	34.62
Means		4.5				8 12 34.622
Mar. 13	20 Cancri d^1	6	5	8 14 13.97	+2.147	8 14 11.82
April 10		6	5	13.38	1.747	11.63
Means		6				8 14 11.728
Nov. 13	22 Argus	6	5	8 15 19.01	+3.370	8 15 15.640
Feb. 15	25 Cancri d^2	6	5	8 16 48.39	+2.314	8 16 46.076

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				h. m. s.	s.	h. m. s.
Mar. 13	1029 A. S. C.	6	5	8 18 10.94	+1.640	8 18 09.30
April 10		6	5	10.90	+1.179	09.72
Means		6				8 18 09.510
Nov. 13	2 Hydræ	6	5	8 18 31.20	+3.428	8 18 27.772
Jan. 18	31 Cancri θ	5.6	5	8 22 30.33	+2.152	8 22 28.18
Feb. 15		5.6	5	30.29	.347	27.94
Mar. 13		5.6	5	30.28	.181	28.10
April 10		5.6	5	29.70	1.792	27.91
Nov. 13		5.6	5	32.04	4.141	27.90
Means		5.6				8 22 28.006
Jan. 18	1044 A. S. C.	6	5	8 27 22.45	+1.973	8 27 20.48
Feb. 15		6	5	22.50	2.165	20.34
Mar. 29		6	5	22.23	1.812	20.42
April 10		6	5	22.08	.642	20.44
Means		6				8 27 20.420
Mar. 29	1049 A. S. C.	6.7	5	8 30 41.60	+1.865	8 30 39.73
April 10		6.7	5	41.36	2.397	38.96
Means		6.7				8 30 39.349
Mar. 13	39 Cancri	6	5	8 30 55.98	+2.257	8 30 53.723
Feb. 15	41 Cancri ε	6	5	8 31 18.16	+2.397	8 31 15.763
Feb. 15	43 Cancri γ	5	5	8 34 03.52	+2.446	8 34 01.07
Mar. 29		5	5	03.22	.100	01.12
Means		5				8 34 01.097
Jan. 18	47 Cancri δ	4.5	5	8 35 37.45	+2.144	8 35 35.31
Mar. 13		4.5	5	37.40	.244	35.16
April 10		4.5	5	36.97	1.870	35.10
Means		4.5				8 35 35.190
Jan. 18	11 Hydræ ε	4	5	8 38 20.08	+1.958	8 38 18.12
Feb. 15		4	5	20.16	2.176	17.98
Mar. 13		4	5	19.95	.054	17.90
29		4	5	19.90	1.870	18.03
April 10		4	5	19.63	.706	17.92
Means		4				8 38 17.990
Feb. 15	14 Hydræ B	5.6	5	8 41 21.38	+2.062	8 41 19.318

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				h. m. s.	s.	h. m. s.
Mar. 13	54 Cancri	6.7	5	8 42 08.69	+2.214	8 42 06.476
April 10	Pixid. Naut. γ	5.6	5	8 43 46.37	+1.274	8 43 45.096
Mar. 13	58 Cancri ρ^4	6	5	8 46 06.51	+2.512	8 46 03.998
April 10	62 Cancri o^1	6	5	8 48 20.93	+1.894	8 48 19.036
Mar. 13	65 Cancri α^2	5	5	8 49 46.04	+2.182	8 49 43.86
29		5	5	45.89	.007	43.88
Means		5				8 49 43.870
Feb. 15	69 Cancri ν	6	5	8 53 24.95	+2.542	8 53 22.42
April 10		6	5	24.34	.094	22 25
Means		6				8 53 22.332
April 10	18 Hydræ ω	6	5	8 57 34.66	+1.781	8 57 32.879
Feb. 15	77 Cancri ξ	5.6	5	9 00 11.53	+2.503	9 00 09.027
April 10	1112 A. S. C.	5.6	5	9 01 03.44	+1.395	9 01 02.045
Feb. 15	22 Hydræ θ	4.5	5	9 06 04.41	+2.158	9 06 02.252
Feb. 15	83 Cancri q	6	5	9 10 05.00	+2.418	9 10 02.58
April 10		6.7	5	04.64	.055	02.58
Means		6				9 10 02.583
Feb. 15	1 Leonis κ	5	5	9 15 22.02	+2.626	9 15 19.39
April 10		5	5	21.56	.257	19.30
Means		5				9 15 19.348
Feb. 15	30 Hydræ α	2	5	9 19 45.65	+2.040	9 19 43.61
April 10		2	5	45.34	1.710	43.63
Means		2				9 19 43.620
April 10	4 Leonis λ	4.5	5	9 22 37.06	+2.225	9 22 34.835
April 10	33 Hydræ	6	5	9 26 35.56	+1.776	9 26 33.784
April 10	14 Leonis ο	4	5	9 32 38.31	+2.032	9 32 36.28
Dec. 13		4	5	40.93	4.473	36.46
Means		4				9 32 36.367
April 10	17 Leonis ε	3	5	9 36 47.89	+2.321	9 36 45.57
Dec. 13		3	5	50.40	4.846	45.55
Means		3				9 36 45.561

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				h. m. s.	s.	h. m. s.
Dec. 13	20 Leonis	7	5	9 40 57.08	+4.730	9 40 52.350
Dec. 13	8 Sextantis *d*	6	5	9 44 39.35	+4.005	9 44 35.345
Dec. 13	27 Leonis ν	6	5	9 49 41.19	+4.431	9 49 36.759
Dec. 13	1199 A. S. C.	7	5	9 54 51.78	+3.853	9 54 47.927
Dec. 13	32 Leonis α	1	5	9 59 55.16	+4.351	9 59 50.809
Dec. 13	1215 A. S. C.	6	5	10 03 22.37	+3.929	10 03 18.441
April 12 Dec. 13	36 Leonis ζ	4.5 4.5	5 5	10 07 49.13 51.61	+2.431 4.584	10 07 46.70 47.03
Means		4.5				10 07 46.867
April 12 Dec. 13	41 Leonis γ	2 2	5 5	10 11 10.75 13.37	+2.367 4.462	10 11 08.38 08.91
Means		2				10 11 08.645
April 12 Dec. 13	Arg. in vel. *r*	4.5 4.5	5 5	10 15 30.15 32.19	+1.646 3.196	10 15 28.50 29.00
Means		4.5				10 15 28.754
Dec. 13	Antl. Pneum. α	4.5	5	10 19 53.83	+3.413	10 19 50.417
May 10 Dec. 14	47 Leonis ρ	4 4	5 5	10 24 25.04 27.07	+1.935 4.165	10 24 23.10 22.90
Means		4				10 24 23.005
Dec. 13 14	1 Hyd. & Crat.	6 6	5 5	10 28 31.88 31.92	+3.618 .683	10 28 28.23 28.24
Means		6				10 28 28.234
May 10	2 Hyd. & Crat. ϕ^3	5	5	10 30 49.14	+1.630	10 30 47.510
Dec. 13 14	33 Sextantis *m*	6 6	5 5	10 33 19.78 19.87	+3.874 .907	10 33 15.91 15.96
Means		6				10 33 15.934
April 12	40 Leonis Min.	5.6	5	10 34 16.47	+2.610	10 34 13.860
Dec. 13	37 Sextantis o^1	6	5	10 37 49.64	+3.987	10 37 45.663

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				h. m. s.	*s.*	*h. m. s.*
May 10	53 Leonis *l*	6	5	10 40 52.77	+2.040	10 40 50.730
Dec. 13	4 Hyd. & Crat. ν	4	5	10 41 47.77	+3.593	10 41 44.18
14		4	5	47.99	.628	44.36
Means		4				10 41 44.269
May 10	6 Hyd. & Crat *b*³	5.6	5	10 45 41.98	+1.686	10 45 40.29
Dec. 13		5.6	5	43.95	3.513	40.44
14		5.6	5	43.97	.547	40.42
Means		5.6				10 45 40.384
May 10	1299 A. S. C.	5	5	10 49 18.94	+1.516	10 49 17.42
Dec. 13		5	5	19.82	3.199	16.62
14		5	5	20.10	.239	16.86
Means		5				10 49 16.967
Dec. 13	58 Leonis *d*	5	5	10 52 21.56	+3.849	10 52 17.71
14		5	5	21.72	.883	17.84
Means		5				10 52 17.774
May 10	61 Leonis *s*	5.6	5	10 53 42.01	+1.935	10 53 40.075
Mar. 17	63 Leonis χ	4.5	5	10 56 48.06	+2.390	10 56 45.67
April 12		4.5	5	48.00	.307	45.69
13		4.5	5	47.83	.300	45.53
Dec. 14		4.5	5	49.54	3.871	45.67
Means		4.5				10 56 45.640
April 13	10 Hyd. & Crat.	6	5	11 01 02.38	+1.980	11 01 00.40
Dec. 14		5	5	03.59	3.362	00.23
Means		5.6				11 01 00.314
Feb. 19	68 Leonis δ	3	5	11 05 37.85	+2.441	11 05 35.41
Mar. 17		3	3	38.05	.655	35.40
April 12		3	5	37.99	.583	35.41
13		3	5	38.00	.576	35.42
May 11		3	5	37.77	.316	35.45
June 7		3	5	37.53	.030	35.50
Dec. 14		3	5	39.49	4 067	35.42
Means		3				11 05 35.430
Mar. 17	75 Leonis *q*	5.6	5	11 09 05.72	+2.338	11 09 03.38
April 12		5.6	5	05.67	.289	03.38
13		5.6	5	05.76	.283	03.48
Means		5.6				11 09 03.413

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				h. m. s.	s.	h. m. s.
Feb. 19	12 Hyd. & Crat. δ	3.4	5	11 11 22.84	+1.961	11 11 20.88
April 12		3.4	5	23.03	2.125	20.91
13		3.4	5	23.02	.119	20.90
May 10		3.4	5	22.80	1.907	20.89
11		3.4	5	22.77	.897	20.87
Dec. 14		3.4	5	24.43	3.519	20.91
Means		3.4				11 11 20.893
Mar. 17	77 Leonis σ	4	5	11 12 55.51	+2.386	11 12 53.124
Mar. 17	78 Leonis ι	4	5	11 15 37.35	+2.469	11 15 34.88
April 13		4	5	37.29	.426	34.86
Means		4				11 15 34.872
May 10	79 Leonis r	6	5	11 15 51.83	+2.099	11 15 49.73
11		6	5	51.90	.089	49.81
Means		6				11 15 49.771
Feb. 19	15 Hyd. & Crat. γ	4	5	11 16 55.59	+1.814	11 16 53.776
Feb. 19	84 Leonis τ	4	5	11 19 44.66	+2.008	11 19 42.65
Mar. 17		4	5	44.83	.705	42.13
April 13		4	5	44.99	.329	42.66
May 10		4	5	44.76	.136	42.62
11		4	5	44.82	.127	42.69
Dec. 14		4	5	46.26	3.699	42.56
15		4	5	46.31	.733	42.58
Means		4				11 19 42.556
Mar. 17	17 Hyd. & Crat.	5.6	5	11 24 23.15	+2.127	11 24 21.02
April 13		6	5	23.38	.086	21.29
Dec 14		6	5	24.49	3.265	21.22
Means		6				11 24 21.177
Feb. 19	19 Hyd. & Crat. ξ	4	5	11 25 10.80	+1.873	11 25 08.93
May 11		4	5	10.92	.834	09.09
Means		4				11 25 09.006
April 13	1359 A. S. C.	6	5	11 27 54.81	+2.810	11 27 52.000
Feb. 19	91 Leonis υ	4.5	5	11 28 47.54	+2.050	11 28 45.49
Mar. 17		4.5	5	47.82	.317	45.50
May 10		4.5	5	47.74	.138	45.60
11		4.5	5	47.87	.130	45.74
Dec. 14		4.5	5	49.14	3.603	45.54
15		4.5	5	49.15	.631	45.52
Means		4.5				11 28 45.565

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Feb. 19	92 Leonis	5.6	5	11 32 29.91	+2.391	11 32 27.52
Mar. 17		5.6	5	30.17	.683	27.49
May 10		5.6	5	30.01	.461	27.55
11		5.6	5	30.17	.450	27.72
Dec. 14		5.6	5	31.23	3.836	27.39
15		5.6	5	31.32	.870	27.45
Means		5.6				11 32 27.520
Feb. 19	27 Hyd. & Crat. ζ	4	5	11 36 41.62	+1.894	11 36 39.73
Mar. 17		4	5	41.87	2.179	39.69
April 13		4	5	42.00	.191	39.81
May 10		4	5	41.76	.020	39.74
11		4	5	41.90	.012	39.89
Dec. 14		4	5	43.11	3.362	39.75
15		4	5	43.00	.395	39.61
Means		4				11 36 39.746
Mar. 17	94 Leonis β	2.3	5	11 40 56.27	+2.534	11 40 53.74
May 11		2.3	5	56.06	.369	53.69
June 7		2.3	5	55.83	.118	53.71
8		2.3	5	55.65	.108	53.54
Means		2.3				11 40 53.670
Feb. 19	5 Virginis β	3.4	5	11 42 23.91	+2.062	11 42 21.85
April 13		3.4	5	24.07	.402	21.67
May 6		3.4	5	23.90	.287	21.61
10		3.4	5	24.11	.257	21.85
Dec. 14		3.4	5	25.33	3.603	21.73
15		3.4	5	25.26	.637	21.62
Means		3.4				11 42 21.721
Mar. 17	28 Hyd. & Crat. β	4	5	11 44 52.99	+2.156	11 44 50.834
Feb. 19	6 Virginis A	6	5	11 46 52.73	+2.120	11 46 50.61
April 13		6	5	52.98	.546	50.43
May 11		6	3	53.09	.322	50.77
Dec. 15		5.6	3	54.02	3.612	50.41
Means		5				11 46 50.555
Feb. 19	7 Virginis b	5.6	5	11 51 47.36	+2.044	11 51 45.32
Mar. 17		5.6	2	47.63	.366	45.26
April 13		5.6	5	47.70	.428	45.27
May 11		5.6	5	47.58	.288	45.30
Means		5.6				11 51 45.287

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Feb. 19	9 Virginis ο	4.5	5	11 57 05.64	+2.093	11 57 03.55
Mar. 17		4.5	5	05.94	.440	03.50
May 11		4.5	5	05.92	.371	03.55
June 7		4.5	5	05.55	.143	03.41
8		4.5	5	05.35	.134	03.22
Means		4.5				11 57 03.446
Jan. 23	1 Corvi α	4.5	5	12 00 11.57	+1.140	12 00 10.430
Feb. 19	10 Virginis *r*	6	5	12 01 31.51	+1.995	12 01 29.51
May 11		6	5	31.83	2.314	29.52
Means		6				12 01 29.515
Mar. 17	2 Corvi ε	4	5	12 01 56.74	+2.179	12 01 54.56
June 8		4	5	56.09	1.894	54.20
Means		4				12 01 54.378
Jan. 23	5 Comæ Ber.	6	5	12 04 02.67	+1.566	12 04 01.104
Feb. 19	12 Virginis ℓ	6	5	12 05 19.16	+2.088	12 05 17.07
May 12		6	5	19.32	.417	16.90
Means		6				12 05 16.987
Jan. 23	4 Corvi γ	3	5	12 07 36.40	+1.149	12 07 35.25
Feb. 20		3	5	36.77	.842	34.93
Mar. 17		3	5	37.49	2.198	35.29
May 6		3	5	37.41	.227	35.18
11		3	5	37.58	.196	35.38
12		3	5	37.53	.190	35.34
June 7		3	5	36.85	1.984	34.87
8		3	5	36.89	.973	34.92
Dec. 15		3	5	38.28	3.277	35.00
16		3	5	38.32	.312	35.01
Means		3				12 07 35.117
May 6	13 Virginis *n*	6	5	12 10 30.52	+2 356	12 10 28.164
Jan. 23		3.4	5	12 11 44.84	+1.265	12 11 43.58
Feb. 19		3.4	3	44.94	.936	43.00
20		3.4	5	45.26	.956	43.30
Mar. 17		3.4	5	45.70	2.313	43.38
April 15		3.4	5	45.43	.426	43.00
May 6		3.4	3	45.72	.364	43.36
11		3.4	5	45.82	.336	43.48
12		3.4	5	45.61	.330	43.28
June 7		3.4	5	45.43	.138	43.29
8	15 Virginis η	3.4	5	45.30	.129	43.17

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Dec. 15	15 Virginis cont'd. η	3	5	12 11 46.68	+3.379	12 11 43.30
16		3.4	5	46.76	.413	43.35
Means		3.4				12 11 43.291
April 15	12 Comæ Ber. e	5	5	12 14 29.88	+2.841	12 14 27.039
Feb. 19	13 Comæ Ber. f	5	5	12 16 18.91	+2.329	12 16 16.58
20		5	5	19.08	.351	16.73
May 6		5.6	5	18.85	.748	16.10
11		5.6	5	19.13	.708	16.42
12		5.6	5	19.04	.700	16.34
June 8		5	5	18.77	.425	16.35
Dec. 15		5	5	19.91	3.496	16.41
16		6	5	19.94	.531	16.41
Means		5.6				12 16 16.418
Feb. 19	16 Comæ Ber. a	5	5	12 19 01.28	+2.332	12 18 58.95
20		5	5	01.29	.355	58.93
April 15		5.6	5	01.50	.769	58.73
27		4.5	5	01.24	.827	58.41
May 6		5	5	01.07	.769	58.30
11		5	5	01.55	.730	58.82
12		5	5	01.40	.724	58.68
25		5	5	01.28	.601	58.68
Means		5				12 18 58.688
Dec. 15	17 Comæ Ber.	5.6	5	12 20 58.19	+3.717	12 20 54.47
16		5.6	5	58.31	.753	54.56
Means		5.6				12 20 54.515
Feb. 19	7 Corvi δ	3	5	12 21 37.55	+1.789	12 21 35.76
20		3	5	37.34	.809	35.53
April 15		3	5	37.81	2.346	35.46
27		3	5	38.19	.317	35.87
May 6		3	5	37.77	.302	35.47
11		3	5	38.05	.278	35.77
12		3	5	38.02	.271	35.75
25		3	5	37.89	.190	35 70
Means		3				12 21 35.664
April 15	21 Virginis q	5.6	5	12 25 33.90	+2.391	12 25 31.51
May 11		5.6	5	34.16	.334	31.83
12		5.6	5	34.05	.328	31.72
Dec. 16		5.6	5	34.96	3.497	31.46
Means		5.6				12 25 31.630

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Jan. 23	9 Corvi β	2.3	5	12 26 00.92	+1.019	12 25 59.90
Feb. 19		2.3	5	01.50	.744	59.76
20		2.3	5	01.52	.767	59.75
April 27		2.3	5	02.11	2.333	59.78
May 6		2.3	5	02.00	.303	59.70
7		2.3	5	02.03	.299	59.73
25		2.3	5	01.92	.192	59.73
June 8		2.3	5	01.64	.085	59.56
Means		2.3				12 25 59.739
Feb. 19	Hyd. & Crat. *d*	5.6	5	12 29 15.86	+1.729	12 29 14.13
20		5.6	5	15.92	.751	14.17
April 15		5.6	5	16.17	2.352	13.82
27		5.6	5	16.60	.369	14.23
May 7		5.6	5	16.45	.275	14.18
12		6	5	16.40	.285	14.12
25		5.6	5	16.28	.198	14.08
Means		5.6				12 29 14.104
June 8	26 Virginis χ	6	5	12 31 01.52	+2.190	12 30 59.33
Dec. 16		5.6	5	02.83	3.268	59.56
Means		5.6				12 30 59.446
Jan. 23	29 Virginis γ^1	4	5	12 33 34.76	+1.135	12 33 33.62
Feb. 19		4	5	35.20	.777	33.42
20		4	5	35.29	.789	33.50
April 15		4	5	35.77	2.274	33.50
27		4	5	35.76	.442	33.32
May 6		4	5	35.70	.419	33.28
7		4	5	35.76	.404	33.36
12		4	5	35.82	.394	33.43
25		4	5	35.88	.320	33.56
Means		4				12 33 33.443
Dec. 16	Hyd. & Crat. *e*	6	5	12 35 32.94	+3.129	12 35 29.811
Jan. 23	33 Virginis	6	5	12 38 16.05	+1.225	12 38 14.83
April 15		6	5	16.85	2.389	14.46
May 12		6	5	17.42	.535	14.89
Means		6				12 38 14.723
Feb. 20	27 Comæ Ber. *n*	6	5	12 38 41.35	+2.297	12 38 39.05
May 7		6	5	41.30	.646	38.65
25		6	5	41.59	.535	39.06
June 8		6	5	41.07	.418	38.65
Means		6				12 38 38.878

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Jan. 23	30 Comæ Ber.	6	5	12 41 30.84	+1.439	12 41 29.40
April 15		6	5	32.22	2.903	29.32
May 12		6	5	31.81	.806	29.00
Dec. 16		6	5	32.52	3.276	29.24
Means		6				12 41 29.240
May 6	Centauri *p*	6	5	12 42 03.94	+2.465	12 42 01 475
June 8	37 Virginis	6.7	5	12 43 30.51	+2.331	12 43 28.179
Feb. 20	31 Comæ Ber. *p*	5.6	5	12 43 56.48	+2.246	12 43 54.23
May 7		5.6	5	56.19	.844	53.35
Means		5.6				12 43 53.790
April 15	35 Comæ Ber. *q*	5	5	12 45 27.28	+2.772	12 45 24.51
Dec. 16		5	5	27.97	3.239	24.73
Means		5				12 45 24.619
May 12	41 Virginis	6	5	12 45 50.51	+2.592	12 45 47.918
Jan. 23	40 Virginis ψ	5.6	5	12 46 03.38	+1.013	12 46 02.37
June 8		5.6	5	04.51	2.274	02.24
Means		5.6				12 46 02.301
Feb. 20	43 Virginis δ	3.4	5	12 47 34.61	+1.859	12 47 32.75
May 7		3.4	5	35.02	2.506	32.51
25		3.4	5	35.38	.425	32.96
Means		3.4				12 47 32.740
Jan. 23	36 Comæ Ber. *r*	5	5	12 51 01.81	+1.235	12 51 00.58
April 15		4.5	5	03.17	2 709	00.46
Means		4.5				12 51 00.518
Feb. 20	37 Comæ Ber.	7	5	12 52 39.04	+2.270	12 52 36.770
Jan. 23	47 Virginis ε	3.4	5	12 54 13.96	+1.143	12 54 12.82
April 15		3.4	5	15.26	2.621	12.64
16		3.4	5	15.51	.623	12.89
May 12		3.4	5	15.34	.603	12.74
June 8		3.4	5	14.95	.440	12.51
Means		3.4				12 54 12.720
April 15	39 Comæ Ber. *t*	6	5	12 58 35.84	+2.777	12 58 33.06
16		6	5	35.99	.778	33.21
May 12		6	5	35.78	.743	33.04
Means		6				12 58 33.103

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Jan. 23	41 Comæ Ber. *u*	5	5	12 59 31.24	+1.312	12 59 29.93
May 7		4	5	32.13	2.879	29.25
Means		4.5				12 59 29.589
June 8	49 Virginis *g*	5.6	5	12 59 33.67	+2 352	12 59 31.32
Dec. 16		5.6	5	34.38	3.124	31.26
17		5.6	5	34.53	.158	31.37
Means		5.6				12 59 31.317
Feb. 20	51 Virginis *θ*	4.5	5	13 01 41.97	+1.744	13 01 40.23
May 7		4.5	5	42.59	2.516	40.07
12		4.5	5	43.02	.508	40.51
13		4.5	5	42.90	.506	40.39
Means		4.5				13 01 40.300
April 16	53 Virginis	5	5	13 03 35.93	+2.457	13 03 33.473
Feb. 20	55 Virginis	6	5	13 05 39.23	+1.656	13 05 37.57
April 27		6	5	40.34	2.494	37.85
May 7		6	5	40.32	.498	37.82
12		6	5	40.44	.493	37.95
13		6	5	40.64	.490	38.15
Means		6				13 05 37.868
April 15	59 Virginis *e*	5.6	5	13 08 52.41	+2.612	13 08 49.80
16		5.6	5	52.76	.616	50.14
Means		5.6				13 08 49.971
May 12	58 Virginis	7	5	13 09 07.05	+2.520	13 09 04.53
13		7	5	07.30	.518	04.78
Means		7				13 09 04.656
Jan. 25	61 Virginis	4.5	5	13 10 03.64	+0.871	13 10 02.769
Jan. 23	Centauri *ι*	3	5	13 11 38.46	+0.689	13 11 37.77
Feb. 20		3	5	39.22	1.625	37.60
April 15		3	5	40.07	2.543	37.53
16		3	5	40.26	.549	37.71
27		3	5	40.58	.615	37.96
May 7		3	5	40.19	.599	37.59
12		3	5	40.13	.591	37.54
13		3	5	40.11	.587	37.52
Dec. 16		3	5	40.60	.989	37.61
Means		3				13 11 37.649

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Jan. 25	64 Virginis *u*	6	5	13 14 06.82	+1.037	13 14 05.783
Jan. 23	67 Virginis *a*	1	5	13 16 47.00	+0.835	13 16 46.17
25		1	5	47.28	.899	46.38
Feb. 20		1	5	47.95	1.651	46.30
April 15		1	5	48.84	2.481	46.36
16		1	5	48.84	.487	46.35
27		1	5	48.81	.532	46.28
May 7		1	5	48.86	.548	46.31
12		1	5	48.98	.549	46 43
13		1	5	48.95	.548	46.40
Dec. 16		1	5	49.33	3.061	46.27
17		1	5	49.46	.094	46.37
Means		1				13 16 46.329
April 15	68 Virginis *i*	5	5	13 18 18.89	+2.483	13 18 16.41
16		5.6	5	19.06	.489	16.57
May 13		5	5	19.34	.553	16.79
Means		5				13 18 16.590
April 16	Centauri *d*	4	5	13 21 50.39	+2.617	13 21 47.77
May 13		4	5	50.22	.685	47.54
Means		4				13 21 47.654
April 16	78 Virginis	6	5	13 26 04.49	+2.573	13 26 01.917
Jan. 25	79 Virginis ζ	4	5	13 26 33.68	+0.921	13 26 32.76
May 13		4	5	35.41	2.618	32.79
Means		4				13 26 32.775
May 22	Hydræ con. *f*	6	5	13 27 59.62	+2.609	13 27 57.011
April 16	Centauri *t*	6	5	13 29 46.70	+2.549	13 29 44.151
May 27	1 Bootis	6	5	13 33 04.61	+2.751	13 33 01.859
Jan. 25	82 Virginis *m*	5.6	5	13 33 14.19	+0.829	13 33 13.361
April 16	2 Bootis	6	5	13 33 30.93	+2.794	13 33 28.136
May 22	83 Virginis	6	5	13 35 55.31	+2.622	13 35 52.69
27		6	5	54.96	.612	52.35
Means		6				13 35 52.518
April 16	85 Virginis	6.7	5	13 37 01.27	+2.516	13 36 58.754
Jan. 25	86 Virginis O	6	5	13 37 26.09	+0.782	13 37 25.308

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Jan. 25	Centauri μ	4	5	13 40 01.76	+0.564	13 40 01.196
April 16	89 Virginis *x*	5.6	5	13 41 13.92	+2.524	13 41 11.396
May 22	3 Centauri *k*	5	5	13 42 39.64	+2.747	13 42 36.89
26		5	5	39.69	.738	36.95
Means		5				13 42 36.922
Jan. 25	4 Centuari *h*	5	5	13 44 02.06	+0.621	13 44 01.439
Jan. 25	8 Bootis η	3	5	13 47 04.95	+0.946	13 47 04.00
April 16		3	5	06.72	2.711	04.01
May 16		3	5	06.64	.807	03.83
22		3	5	06.92	.795	04.12
26		3	5	06.83	.779	04.05
31		3	5	06.93	.758	04.17
Dec. 17		3	5	06.80	.775	04.03
Means		3				13 47 04 030
April 16	9 Bootis *l*	5	5	13 49 18.74	+2.861	13 49 15.88
17		5	5	18.57	.869	15.70
Means		5				13 49 15.790
May 31	3 Hydræ con. 8^{1}	6	5	13 49 36.41	+2.712	13 49 33.698
May 22	4 Hydræ con. 8^{2}	6	5	13 51 06.17	+2.734	13 51 03.44
26		6	5	06 24	.731	03.51
Means		6				13 51 03.472
Jan. 25	93 Virginis τ	5	5	13 53 31.57	+0.779	13 53 30.79
May 27		4.5	5	33.18	2.700	30.48
31		5	5	33.44	.692	30.75
Means		5				13 53 30.674
May 13	11 Bootis	6	5	13 53 57.83	+2.937	13 53 54.89
22		6	2	57.94	.914	55.03
26		6	5	57.79	.898	54.89
Means		6				13 53 54.937
May 31	5 Hydræ con. π	4.5	5	13 57 19.58	+2.772	13 57 16.81
June 1		4.5	5	19.59	.770	16.82
Means		4.5				13 57 16.814
Jan. 25	5 Centauri θ	3	5	13 57 18.21	+0.507	13 57 17.70
April 16		2	5	20.23	2.667	17.56

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
April 17	5 Centauri θ cont'd.	2	3	13 57 20.19	+2.677	13 57 17.51
May 13		2	3	20.39	.853	17.54
22		2	5	20.46	.862	17.60
26		2	5	20.57	.857	17.71
Means		2				13 57 17.603
May 13	96 Virginis *y*	6.7	5	14 00 32.33	+2.708	14 00 29.622
April 16	1610 A. S. C.	6	5	14 02 09.45	+2.544	14 02 06.91
17		6	5	09.47	.555	06.92
May 31		6	5	09.71	.742	06.97
June 1		6	5	09.63	.739	06.89
Means		6				14 02 06.922
June 11	12 Bootis *d*	5.6	5	14 03 08.64	+2.799	14 03 05.841
Feb. 22	98 Virginis κ	4	5	14 04 23.68	+1.511	14 04 22.17
Mar. 21		4	5	24.59	2.159	22.43
May 13		4	5	25.16	.720	22.44
22		4	5	24.80	.736	22.06
26		4	5	24.91	.738	22.20
27		4	5	24.87	.738	22.13
30		4	5	24.93	.736	22.19
31		4	5	25.11	.735	22.38
June 1		4	5	24.94	.733	22.21
Means		4				14 04 22.236
Jan. 15	15 Bootis υ	6	5	14 07 01.76	+0.417	14 07 01.343
Feb. 22	16 Bootis α	1	5	14 08 23.67	+1.669	14 08 22.00
Mar. 21		1	5	24.07	2.325	21.75
April 16		1	5	24.68	.675	22.01
17		1	5	24.76	.685	22.08
May 13		1	5	24.74	.818	21.92
22		1	5	24.66	.819	21.81
26		1	5	24.57	.807	21.76
27		1	5	24.87	.801	22.07
30		1	5	24.72	.795	21.93
31		1	5	24.70	.791	21.91
June 1		1	5	24.84	.787	22.05
11		1	5	24.62	.741	21.88
Means		1				14 08 21.933
Jan. 25	100 Virginis λ	5	5	14 10 28.46	+0.597	14 10 27.86
Mar. 21		6	5	30.05	2.143	27.91
April 16		4.5	5	30.31	.541	27.77
17		4.5	5	30.18	.554	27.63
June 11		4.5	5	30.38	.749	27.63
Means		5				14 10 27.760

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
May 31	18 Bootis ι	6	5	14 11 34.75	+2.794	14 11 31.96
June 1		6	5	34.67	.792	31.88
Means		6				14 11 31.917
Feb. 22	20 Bootis υ	6	5	14 12 12.47	+1.628	14 12 10.84
May 22		6	5	13.89	2.878	11.01
30		6	5	13.82	.817	11.00
Means		6				14 12 10.950
June 11	7 Hydræ con.	6	5	14 13 56.48	+2.861	14 13 53.619
April 17	2 Libræ	6	5	14 14 52.12	+2.553	14 14 49.567
May 31	1633 A. S. C.	6	5	14 15 44.87	+2.869	14 15 42.00
June 1		6	5	44.72	.867	41.85
Means		6				14 15 41.927
Feb. 22	1636 A. S. C.	5.6	5	14 16 15.37	+1.529	14 16 13.84
May 22		5.6	5	16.63	2.784	13.85
30		5.6	5	16.78	.783	14.00
Means		5.6				14 16 13.897
April 17	8 Hydræ con.	5.6	5	14 18 52.04	+2.655	14 18 49.385
Feb. 22	105 Virginis φ	5	5	14 19 59.12	+1.469	14 19 57.65
Mar. 21		5	5	20 00.15	2.079	58.07
May 22		5	5	00.78	.782	58.00
30		5.6	5	00.61	.788	57.82
Means		5				14 19 57.888
May 31	106 Virginis N^2	6	5	14 20 18.77	+2.796	14 20 15.97
June 1		6	5	18.73	.795	15.94
Means		6				14 20 15.954
Feb. 22	25 Bootis ρ	4	5	14 24 57.82	+1.680	14 24 56.13
Mar. 21		4.5	5	58.35	2.633	55.72
April 17		4.5	5	58.89	.847	56.04
May 22		4.5	5	58.83	.998	55.83
30		4	5	59.01	.977	56.03
June 11		4	5	58.64	.907	55.73
Means		4				14 24 55.913

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
May 31	Centauri η	3	5	14 25 25.74	+3.188	14 25 22.55
June 1		3	5	25.88	.182	22.70
Means		3				14 25 22.625
Feb. 22	28 Bootis σ	5	5	14 27 44.48	+1.624	14 27 42.86
April 17		5	5	45.69	2.808	42.88
May 22		5	5	45.55	.991	42.56
30		5	5	45.77	.972	42.80
Means		5				14 27 42.775
May 31	1651 A. S. C.	6.7	5	14 28 32.61	+2.849	14 28 29.76
June 1		6.7	5	32.43	.850	29.58
11		6.7	5	32.46	.841	29.62
Means		6.7				14 28 29.653
May 30	Lupi α	3	5	14 31 23.18	+3.390	14 31 19.79
31		3	5	23 09	.389	19.70
June 1		3	5	22.91	.389	19.52
Means		3				14 31 19.670
Mar. 21	29 Bootis π	5	5	14 33 14.72	+2.191	14 33 12.53
May 15		4	5	15.49	.850	12.64
Means		4.5				14 33 12.584
April 17	107 Virginis μ	4.5	5	14 34 40.74	+2.547	14 34 38.19
18		4.5	5	40.60	.559	38.04
Means		4.5				14 34 38.117
Feb. 22	34 Bootis	4.5	5	14 36 25 01	+1.559	14 36 23.45
May 26		4.5	5	26 59	2.957	23.63
Means		4.5				14 36 23.542
Feb. 22	36 Bootis ε	3	5	14 38 01.53	+1.551	14 37 59.98
Mar. 21		3	5	02.32	2 301	38 00.02
April 17		3	5	02.65	.752	37 59.90
18		3	5	02.74	.765	37 59.98
May 15		3	5	02.95	.951	38 00 00
26		3	5	03.03	.961	38 00.07
30		3	5	02.98	.961	38 00.02
31		3	5	02.71	.957	37 59.75
June 1		3	5	02.84	.953	37 59.89
5		3	5	02.99	.937	38 00.05
11		3	5	02.84	.901	37 59.94
July 9		3	5	02.57	.651	37 59.92
Aug. 5		3	5	02.26	.269	37 59.99
Means		3				14 37 59.962

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Feb. 22	9 Libræ α^2	3	5	14 42 03.62	+1.334	14 42 02.29
Mar. 21		3	5	04.42	2.076	02.34
April 18		3	5	04.87	.586	02.28
May 15		3	5	05.16	.861	02.30
26		3	5	05.28	.914	02.37
30		3	5	05.25	.926	02.32
31		3	5	05.35	.927	02.42
June 1		3	5	05.26	.928	02.33
5		3	5	05.18	.932	02.25
11		3	5	05.18	.940	02.24
Means		3				14 42 02.314
April 17	13 Libræ ξ^1	6	5	14 45 44.81	+2.553	14 45 42.26
18		6	5	44.82	.566	42.25
May 15		6	5	44.97	.847	42.12
30		6	5	45.23	.913	42.32
June 5		6	5	45.05	.923	42.13
11		6.7	5	45.14	.923	42.22
Means		6				14 45 42.217
Mar. 21	1690 A. S. C.	6.7	5	14 48 10.32	+2.072	14 48 08.25
April 18		6	5	10.80	.619	08.18
May 31		6.7	5	11.38	3.004	08.38
June 1		6.7	5	11.32	.006	08.31
11		6.7	5	11.15	.014	08.14
Means		6.7				14 48 08.252
May 30	Centauri χ	3	5	14 48 50.33	+3.375	14 48 46.955
Feb. 22	1698 A. S. C.	6	5	14 49 45.63	+1.394	14 49 44.24
May 26		6	5	47.10	2.895	44.21
June 5		6	5	47.23	.898	44.33
Means		6				14 49 44.260
June 11	18 Libræ	6.7	5	14 50 17.59	+2.935	14 50 14.655
Mar. 21	19 Libræ δ	5	5	14 52 27.94	+2.031	14 52 25.91
May 31		5	5	28.97	.922	26.05
June 1		5	5	28.90	.925	25.98
Means		5				14 52 25.980
Feb. 22	20 Libræ	3.4	5	14 54 44.59	+1.268	14 54 43.32
April 17		3.4	5	45.93	2.642	43.29
18		3.4	5	45.99	.658	43.33
May 30		3.4	5	46.56	3.079	43.48

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
May 31	20 Libræ cont'd.	3.4	5	14 54 46.56	+3.081	14 54 43.48
June 1		3 4	5	46.41	.086	43.32
5		3.4	5	46.07	.094	42.98
11		3.4	5	46.21	.085	43.13
Means		3.4				14 54 43.291
Mar. 21	43 Bootis ψ	5	5	14 57 37.66	+2.177	14 57 35.483
May 30	21 Libræ ν^1	6.7	5	14 57 45.93	+2.586	14 57 43.354
April 18	22 Libræ ν^2	6.7	5	14 57 56.35	+2.585	14 57 53.765
June 11	45 Bootis c	5	5	15 00 19.53	+2.943	15 00 16.59
12		5	5	19.36	.938	16.42
Means		5				15 00 16.504
Mar. 21	24 Libræ ι^1	5.6	5	15 03 09.04	+2.025	15 03 07.02
April 18		5.6	5	09.37	.159	07.21
June 11		5.6	5	09.93	3.064	06.87
12		5.6	5	09.98	.063	06.92
Means		5.6				15 03 07.005
Mar. 21	27 Libræ β	2.3	5	15 08 26.38	+1.978	15 08 24.40
April 18		2.3	5	26.86	2.538	24.32
June 11		2.3	5	27.35	3.008	24.34
12		2.3	5	27.32	.008	24.31
July 9		2.3	5	27.15	2.918	24.23
Aug. 5		2.3	5	26.96	.654	24.31
Means		2.3				15 08 24.318
April 18	28 Libræ υ	6	5	15 11 52.58	+2.590	15 11 49.99
June 11		6.7	5	53.13	3.103	50.03
12		6.7	5	53.26	.102	50.16
Means		6.7				15 11 50.060
Mar. 21	Lupi ϕ^2	5	5	15 12 59.80	+2.137	15 12 57.66
July 10		5	5	13 00.63	3.309	57.32
Means		5				15 12 57.492
April 18	31 Libræ ϵ	5.6	3	15 15 33.94	+2.541	15 15 31.40
May 16		5.6	5	34.93	.904	32.03
June 11		5.6	5	35.03	3.020	32.01
12		6	5	35.14	.042	32.10
Means		5.6				15 15 31.885

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Mar. 21	9 Serpentis	5.6	5	15 18 24.14	+1.978	15 18 22.16
July 9		5.6	5	25.01	2.821	22.19
10		5.6	5	24.82	.812	22.01
Means		5.6				15 18 22.120
May 16	32 Libræ ζ^1	6	5	15 19 17.51	+2.965	15 19 14.55
June 11		6	5	17.63	3.119	14.51
12		6	5	17.76	.121	14.64
Means		6				15 19 14.567
April 18	10 Serpentis	5.6	5	15 20 36.08	+2.449	15 20 33.631
June 8	3 Cor. Bor. β	4	5	15 21 16.69	+3.009	15 21 13.681
May 16	34 Libræ ζ^3	6	5	15 21 42.29	+2.970	15 21 39.32
July 10		6	5	42.46	3.591	38.87
Means		6				15 21 39.094
May 16	35 Libræ ζ^4	6	5	15 23 56.35	+2.977	15 23 53.37
June 11		6	5	56.63	3.141	53.49
12		6	5	56.56	.143	53.42
Means		6				15 23 53.427
Mar. 21	Lupi γ	4	5	15 24 32.82	+2.171	15 24 30.649
July 10	11 Serpentis	6	5	15 24 46.48	+3.435	15 24 43.045
Mar. 21	5 Cor. Bor. α	2	5	15 27 56.89	+1.993	15 27 54.90
May 16		2	5	57.78	2.922	54.86
June 7		2	5	57.87	3.002	54.87
8		2	5	57.98	.003	54.98
11		2	5	58.02	2.998	55.02
12		2	5	57.80	.995	54.81
23		2	5	57.80	.950	54.85
July 9		2	5	57.82	.824	55.00
10		2	5	57.68	.813	54.87
Aug. 5		2	5	57.32	.462	54.86
Means		2				15 27 54.902
Mar. 21	42 Libræ χ	5.6	5	15 30 52.19	+1.965	15 30 50.225
May 16	43 Libræ κ	5	5	15 32 47.29	+3.026	15 32 44.26
June 8		5	5	47.69	.206	44.48
12		5	5	47.74	.221	44.52
Means		5				15 32 44.420

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
July 10	19 Serpentis τ^3	6	5	15 33 40.63	+2.869	15 33 37.761
Mar. 21	24 Serpentis α	2.3	5	15 36 25.31	+1.866	15 36 23.44
April 19		2.3	5	25.87	2.487	23.38
May 16		2.3	5	26.36	.856	23.50
June 7		2.3	5	26.30	.998	23.30
8		2.3	5	26.44	3.002	23.44
12		2.3	5	26.54	.009	23.53
23		2.3	5	26.48	.008	23.47
July 5		2.3	5	26.47	2.966	23.50
10		2.3	5	26.42	.954	23.47
Aug. 5		2.3	5	26.10	.857	23.24
Means		2.3				15 36 23.427
April 19	1 Scorpii b	5	5	15 41 24.89	+2.672	15 41 22.22
May 16		5.6	5	25.20	3.114	22.09
June 7		5	5	25.26	.337	21.92
8		5	5	25.54	.344	22.20
12		5	5	25.56	.361	22.20
23		5	5	25.62	.383	22.24
July 5		5	5	25.68	.353	22.33
10		5	5	25.39	.328	22.06
Means		5				15 41 22.158
April 19	2 Scorpii A^1	5	5	15 44 03.61	+2.665	15 44 00.95
May 16		5	5	04.23	3.132	01.10
June 7		5	5	04.13	.342	00.79
8		5	5	04.55	.346	01.21
12		5	5	04.76	.364	01.40
13		5	5	04.57	.369	01.20
23		5	5	04.63	.388	01.24
July 5		5	5	04.54	.364	01.18
10		5	5	04.49	.339	01.15
Means		5				15 44 01.136
April 19	5 Scorpii ρ	4	5	15 47 03.85	+2.720	15 47 01.130
May 16	6 Scorpii π	3.4	5	15 49 14.20	+3.156	15 49 11.04
June 7		3.4	3	14.18	.378	10.80
8		3.4	5	14.58	.385	11.20
13		3.4	5	14.58	.410	11.18
23		3.4	5	14.74	.433	11.31
July 5		3.4	5	14.51	.414	11.10
Means		3.4				15 49 11.105
April 19	7 Scorpii δ	3	5	15 50 55.64	+2.623	15 50 53.02
July 10		3	5	56.40	3.338	53.06
12		3	5	56.32	.327	53.00
Means		3				15 50 53.027

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
May 16	50 Libræ	6	5	15 52 12.67	+2.931	15 52 09.74
June 8		6	5	12.77	3.136	09.63
12		6	5	12 76	.154	09.61
13		6	5	12.82	.158	09.66
23		6	5	12.98	.178	09.80
Means		6				15 52 09.688
April 19	8 Scorpii β^1	2	5	15 56 11.14	+2.582	15 56 08.56
May 16		2	5	11.60	3.059	08.54
June 7		2	5	11.86	.289	08.57
8		2	5	11.83	.297	08.53
12		2	5	11.98	.317	08.66
13		2	5	11.98	.321	08.66
23		2	5	11.91	.346	08.56
July 5		2	5	11.97	.343	08.63
10		2	5	12.00	.329	08.67
12		2	5	11.83	.317	08.51
Aug. 6		2	5	11.67	.089	08.58
Means		2				15 56 08.588
April 19	45 Serpentis g^1	6	5	16 00 01.69	+2.417	15 59 59.27
May 16		6	5	02.23	.840	59.39
June 23		6	5	02.47	3.056	59.41
Means		6				15 59 59.357
July 10	47 Serpentis	6	5	16 00 48.53	+3.015	16 00 45.515
June 8	7 Herculis κ^1	5.6	5	16 00 54.14	+3.011	16 00 51.13
13		5.6	5	54.08	.027	51.05
Means		5.6				16 00 51.091
April 19	1 Ophiuchi δ	3	5	16 06 00.49	+2.436	16 05 58.05
May 16		3	5	00.92	.892	58.03
17		3	5	00.92	.906	58.01
June 8		3	5	01.31	3.121	58.19
12		3	5	01.12	.143	57.98
13		3	5	01.06	.148	57.91
23		3	5	01.22	.170	58.05
July 5		3	5	01.04	.166	57.87
10		3	5	01.01	.153	57.86
Aug. 6		3	5	00.97	2.930	58.04
Means		3				16 05 57.999
April 19	Scorpii *d*	5.6	5	16 08 25.94	+2.690	16 08 23.250
May 16	20 Scorpii σ	4	5	16 11 31.57	+3.181	16 11 28 39
17		4	5	31.74	.197	28.54

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
June 8	20 Scorpii σ cont'd.	4	5	16 11 31.98	+3.460	16 11 28.52
12		4	5	32.04	.491	28.55
13		4	5	31.96	.497	28.46
July 10		4	5	32.00	.529	28.47
Aug. 6		4	5	31.71	.303	28.41
Means		4				16 11 28.477
April 19	20 Herculis γ	3.4	5	16 14 54.09	+2.370	16 14 51.72
May 16		3.4	3	54.47	.822	51.65
17		3.4	5	54.71	.833	51.88
Aug. 6		3.4	5	54.61	.708	51.90
Means		3.4				16 14 51.788
June 8	19 Cor. Bor. ξ	5	5	16 15 54.55	+3.041	16 15 51.51
12		5	5	54.78	.049	51.73
13		5	5	54.68	.050	51.63
July 10		5	5	55.08	2.941	52.14
Means		5				16 15 51.502
April 19	21 Scorpii α	1	5	16 19 39.13	+2.634	16 19 36.50
20		1	5	39.10	.659	36.44
May 16		1	5	39.65	3.201	36.45
17		1	5	39.74	.218	36.52
June 8		1	5	40.09	.499	36.59
12		1	5	39.98	.540	36.44
13		1	5	40.06	.547	36.51
July 10		1	5	40 13	.604	36.53
11		1	5	40.04	.599	36.44
Aug. 6		1	5	39.85	.391	36.46
Means		1				16 19 36.488
June 8	9 Ophiuchi ω	5	5	16 22 43.14	+3.412	16 22 39.73
12		5	5	42.82	.444	39.38
13		5	5	43.08	.457	39.62
Means		5				16 22 39.577
April 19	23 Scorpii τ	3.4	5	16 25 58.87	+2.657	16 25 56.21
20		3.4	5	59.01	.682	56.33
May 16		3.4	5	59.16	3.251	55 91
17		3.4	5	59.26	.269	55.99
June 8		3.4	5	59.57	.573	56.00
12		3	5	59.78	.609	56.17
13		3.4	5	59.58	.617	55.96
July 10		3.4	5	59.90	.684	56.22
11		3.4	5	59.75	.681	56.07
Aug. 6		3.4	5	59.53	.470	56.06
Means		3.4				16 25 56.092

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h m. s.*
April 20	33 Herculis	7	5	16 29 07.75	+2.344	16 29 05.41
May 17		7	5	08.39	.833	05.56
June 13		7	5	08.45	3.104	05.35
July 11		7	5	08 62	.124	05.50
Means		7				16 29 05.455
June 13	24 Scorpii *m*	5	5	16 32 22.87	+3.410	16 32 19.460
April 20	1908 A. S. C.	6	5	16 35 03.05	+2.671	16 35 00.38
May 17		6.7	5	03.74	3.284	00.46
July 11		6.7	5	04.00	.745	00.26
Means		6.7				16 35 00.367
June 13	25 Scorpii	6	5	16 37 07.79	+3 593	16 37 04.197
July 11	43 Herculis *i*	5	5	16 38 12.32	+3.140	16 38 09.180
April 19	26 Scorpii ε	3	5	16 39 51.27	+2.735	16 38 48.54
20		3	5	51.68	.764	48.92
May 17		3	5	52.28	3.421	48.86
Means		3	-			16 38 48.773
July 11	47 Herculis *k*	5.6	5	16 42 36.60	+3.169	16 42 33.431
April 19	50 Herculis *s*	5.6	5	16 44 26.79	+2.250	16 44 24.54
20		5.6	5	26.73	.272	24.46
May 17		5.6	5	27.20	.791	24.41
June 13		5	5	27.09	3.044	24.05
Means		5.6				16 44 24.365
July 11	1934 A. S. C.	6	5	16 46 51.51	+3.539	16 46 47.971
May 17	54 Herculis	5.6	5	16 48 23.07	+2.765	16 48 20.31
June 13		5.6	5	23.31	3.508	19.80
July 4		5.6	5	23.33	.104	20.23
Means		5.6				16 48 20.103
April 20	27 Ophiuchi κ	4	5	16 50 08.25	+2.255	16 50 06.00
July 11		4	5	08.96	3.170	05.79
Means		4				16 50 05 892
May 17	29 Ophiuchi *s*	6.7	5	16 52 33.19	+3.191	16 52 30.00
July 4		6	3	33.84	.608	30.23
Means		6				16 52 30.115

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
April 19	58 Herculis ε	3	5	16 54 12.46	+2.195	16 54 10.27
20		3	5	12.45	.222	10.23
June 13		3	5	12.84	3.040	09.80
July 11		3	5	13.45	.017	10.43
Means		3				16 54 10.183
May 17	32 Ophiuchi	5.6	5	16 55 50.91	+2.758	16 55 48.15
July 4		5.6	5	51.22	3.151	48.07
Means		5.6				16 55 48.110
June 13	1956 A. S. C.	6	5	16 57 20.76	+3.210	16 57 17.550
April 20	60 Herculis	5	5	16 57 59.88	+2.209	16 57 57.67
July 11		5	5	58 00.87	3.158	57.71
Means		5				16 57 57.691
May 17	1959 A. S. C.	6	5	17 00 01.40	+2 849	16 59 58.55
July 4		6	5	01.76	3.327	58.43
Means		6				16 59 58.492
June 13	Scorpii η	4	5	17 00 46.84	+4.309	17 00 42.531
April 20	35 Ophiuchi η	2.3	5	17 01 14.92	+2.415	17 01 12.505
July 11	29 Scorpii	6.7	5	17 04 20.62	+3.872	17 04 16.748
May 17	36 Ophiuchi A	5.6	5	17 05 34.47	+3.225	17 05 31.25
18		5	5	34.51	.245	31.27
June 13		5	5	34.58	.674	30.91
July 4		5.6	5	35.12	.827	31.29
Means		5				17 05 31.180
April 20	64 Herculis α	3.4	5	17 07 23.40	+2.164	17 07 21.24
July 7		3.4	5	24.45	3.172	21.28
11		3.4	5	24.41	.168	21.24
Aug. 8		3.4	5	24.25	2.964	21.29
Means		3.4				17 07 21.262
May 17	41 Ophiuchi σ	4.5	5	17 08 26.92	+2.830	17 08 24.09
18		4.5	5	27.00	.848	24.15
Means		4.5				17 08 24.121
June 13	65 Herculis δ	3.4	5	17 08 30.62	+3.035	17 08 27.59
July 4		4	5	30.63	.099	27.53
Means		3.4				17 08 27.558

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
April 20	40 Ophiuchi ρ	5	5	17 11 27.68	+2.458	17 11 25.22
July 11		4.5	5	28.85	3.748	25.10
Means		4.5				17 11 25.162
May 17	42 Ophiueni θ	3.4	5	17 12 14.58	+3.204	17 12 11.38
18		3.4	5	14.72	.228	11.49
June 13		3.4	5	15.10	.670	11.43
July 4		3.4	5	15.30	.840	11.46
7		3.4	5	15.28	.849	11.43
Aug. 8		3.4	5	14.96	.707	11.25
Means		3.4				17 12 11.407
July 11	70 Herculis a	5.6	5	17 14 22.03	+3.093	17 14 18.937
April 20	1990 A. S. C.	6	5	17 15 10.67	+2.453	17 15 08.217
May 18	44 Ophiuchi b	5.6	5	17 16 39.57	+3.206	17 16 36.36
July 4		5.6	5	40.19	.835	36.36
7		5.6	6	40.08	.844	36.24
Means		5.6				17 16 36.320
May 18	34 Scorpii υ	3.4	3	17 19 57.38	+3.583	17 19 53.75
July 4		3.4	3	58.05	4.302	53.75
Means		3.4				17 19 53.748
July 7	51 Ophiuchi e^2	5	5	17 21 43.49	+3.859	17 21 39.63
11		5	5	43.21	.870	39.34
12		5	5	43.51	.870	39.64
25		5.6	5	43.37	.849	39.52
27		5.6	5	43.40	.838	39.56
Means		5				17 21 39.538
April 19	35 Scorpii λ	3	5	17 22 47.95	+2.721	17 22 45.229
April 20	76 Herculis λ	4.5	5	17 24 18.52	+2.036	17 24 16.48
May 18		4.5	5	19.06	.664	16.40
July 4		4.5	5	19.50	3.108	16.39
Aug. 8		4.5	5	19.21	.181	16.03
Means		4.5				17 24 16.325
April 19		2	5	17 27 32.68	+2.049	17 27 30.63
20		2	5	32.74	.076	30.66
May 18		2	5	33.18	.706	30.47
July 4		2	5	33.78	3.221	30.56
7		2	5	33.82	.230	30.59
11	55 Ophiuchi α	2	5	33,90	.232	30.67

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
July 12	55 Ophiuchi α	2	5	17 27 33.78	+3.230	17 27 30.55
25	cont'd.	2	5	33.76	.186	30.57
27		2	5	33.75	.176	30.58
Aug. 8		2	5	33.65	.076	30.57
Means		2				17 27 30.585
April 20	Scorpii κ	3	5	17 31 28.40	+2.784	17 31 25.62
May 18		3	5	29.34	3.646	25.69
July 4		3	5	30.16	4.484	25.68
Aug. 8		3	3	30.07	.333	25.74
Means		3				17 31 25.682
July 11	56 Serpentis ο	4.5	5	17 32 28.98	+3.640	17 32 25.34
12		4.5	5	29.23	.642	25.59
25		4.5	5	28.96	.630	25.33
27		4.5	5	28.97	.624	25.35
Means		4.5				17 32 25.402
April 19	60 Ophiuchi β	3	5	17 35 36.17	+2.062	17 35 34.108
April 20	3 Sagittarii p	5	5	17 37 32.13	+2.492	17 37 29.64
May 18		5.6	5	33.10	3.276	29.82
July 11		5	5	33.63	4.054	29.58
12		5	5	33.82	.056	29.76
25		5	5	33.50	.051	29.45
27		5	5	33 61	.045	29.57
Aug. 8		5	5	33.43	3.965	29.47
9		5	5	33.60	.956	29.64
Means		5				17 37 29.616
April 19	86 Herculis μ	4	5	17 40 13.98	+1.898	17 40 12 08
20		3.4	5	13.97	.921	12.05
May 18		4	5	14 51	2.601	11.91
July 11		4	5	15.11	3.110	12.00
12		4	5	15.31	.107	12.20
25		4	5	14.64	.044	11.60
27		4	5	15.15	.028	12.12
Means		4				17 40 11.994
Aug. 8	87 Herculis	5	5	17 42 22.86	+2.936	17 42 19.92
9		5	5	22.94	.909	20.03
Means		5				17 42 19.977
May 18	63 Ophiuchi z	6	5	17 45 06.56	+3.190	17 45 03.37
July 11		6.7	5	07.14	.990	03.15
12		6.7	5	07.45	.993	03.46

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
July 25	63 Ophiuchi *z*	6.7	5	17 45 07.38	+3.998	17 45 03.38
27	cont'd.	6.7	5	07.41	.992	03.42
Means		6.7				17 45 03.356
Aug. 8	2051 A. S. C.	6	5	17 48 24.10	+3.440	17 48 20.66
9		6	5	24.15	.431	20.72
30		6	5	24.05	.193	20.86
31		6	5	24.05	.178	20.87
Sept. 7		6	5	23.93	.075	20.86
Means		6				17 48 20.794
July 11	2052 A. S. C.	5	5	17 48 53.10	+4.183	17 48 48.92
12		5	5	53.31	.187	49.12
25		5	5	53.42	.195	49.23
27		5	5	53.13	.189	48.94
Means		5				17 48 49.052
May 18	89 Herculis	6	5	17 49 00.41	+2.570	17 48 57.840
April 20	64 Ophiuchi ν	4	5	17 50 15.28	+2.167	17 50 13.113
Aug. 30	57 Serpentis ζ	5	5	17 52 05.07	+3.205	17 52 01.87
31		5	5	05.00	.191	01.81
Sept. 7		5	5	05.02	.087	01.93
Means		5				17 52 01.870
May 18	94 Herculis ν	5	5	17 52 25.16	+2.546	17 52 22.614
July 25	67 Ophiuchi *o*	4	5	17 52 41.32	+3.406	17 52 37.91
27		4	5	41.39	.400	37.99
Means		4				17 52 37.952
April 20	10 Sagittarii γ^2	4	5	17 55 34.53	+2.481	17 55 32.05
Aug. 9		4	5	36.14	4.156	31.98
30		4	5	35.75	3.898	31.85
31		4	5	36.09	.883	32.21
Sept 7		4	5	35.52	.768	31.75
Means		4				17 55 31.968
April 20	2085 A. S. C.	5	5	17 57 59.68	+2.432	17 57 57.25
July 12		5	5	58 01.34	4.157	57.18
25		5	5	01.42	.177	57.24
27		5	5	01.43	.174	57.26
Aug. 3		5	5	01.23	.144	57.09
9		5	5	01.09	.104	56.99
31		5	5	01.10	3.839	57.26
Means		5				17 57 57.181

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	s.	h. m. s.
Sept. 7	72 Ophiuchi S²	4	5	17 59 48.61	+2.859	17 59 45.751
May 18	13 Sagittarii μ^1	3.4	5	18 04 14.84	+3.068	18 04 11.77
July 12		3.4	5	15.65	.942	11.71
25		3·4	5	15.68	.970	11.71
27		3.4	5	15.71	.970	11.74
Aug. 2		3.4	5	15.67	.950	11.72
3		3.4	5	15.63	.945	11.69
9		3.4	5	15.60	.911	11.69
30		3.4	5	15.45	.682	11.77
31		3.4	1	15.57	.668	11.90
Sept. 7		3.4	5	15.31	.570	11.74
Means		3.4				18 04 11.744
Aug. 9	2103 A. S. C.	5.6	5	18 08 06.51	+4.114	18 08 02.396
May 18	19 Sagittarii δ	3.4	5	18 10 48.44	+3.275	18 10 45.17
July 12		3.4	5	49.44	4 251	45.19
25		3.4	5	49.67	.286	45.37
Aug. 3		3.4	3	49.39	.264	45.13
Sept. 7		3.4	5	48.86	3.862	45.00
Means		3.4				18 10 45.172
Aug. 9	20 Sagittarii ϵ	3	5	18 13 37.61	+4.422	18 13 33.188
Aug. 30	Herculis		2	18 14 14.21	+2.807	18 14 11.40
Sept. 6		6	3	14.47	.689	11.78
7		6	4	14.54	.671	11.87
Means		6				18 14 11.683
May 18	107 Herculis t	6	5	18 14 48.95	+2.445	18 14 46.51
Aug. 3		6	5	49.79	3.047	46.74
30		5	5	49.35	2.674	46.68
Sept. 6		5	5	49.25	.544	46.71
7		5	5	49.45	.524	46.93
Means		5				18 14 46.714
May 18	22 Sagittarii λ	4	5	18 18 09.29	+3.136	18 18 06.15
July 12		4	5	09.92	4.117	05.80
Aug. 3		4	2	09.75	.144	05.61
9		4	5	10 00	.099	05.90
Means		4				18 18 05.865
Aug. 30	39 Serpentis d	6	5	18 19 04.67	+3.263	18 19 01.41
Sept. 6		6	5	04.47	.166	01.30
7		6	5	04.49	.151	01.34
Means		6				18 19 01.350
Aug. 9	2132 A. S. C.	6	5	18 22 07.68	+3.917	18 22 03.76
26		6	5	07.59	.756	03.83
28		6	5	07.24	.741	03.50

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	*s.*	*h. m. s.*
Aug. 30	2132 A. S. C. cont'd.	6	5	18 22 07.54	+3.716	18 22 03.82
Sept. 6		6	5	07.26	.618	03.64
7		6	5	07.31	.604	03.71
Means		6				18 22 03.709
July 12	Herculis H	6	5	18 23 01.26	+3.188	18 22 58.07
13		6	5	00.99	.191	57.80
Means		6				13 22 57.985
Aug. 9	2146 A. S. C.	6	5	18 26 09.85	+3.101	18 26 06.749
Aug. 28	Clypei Sob. *q*	6	5	18 26 12.40	+3.573	18 26 08.83
30		6	5	12.55	.549	09.00
Sept. 6		6	5	11.88	.455	08.43
7		6	5	12.34	.440	08.90
Means		6				18 26 08.790
July 12	1 Aquilæ *m*	5	5	18 26 33.71	+3.676	18 26 30.03
13		5	5	33.79	.681	30.11
Means		5				18 26 30.071
July 13	26 Sagittarii	6	5	18 32 10.04	+4.105	18 32 05.94
Aug. 9		6.7	5	10.16	.129	06.03
26		6	5	10.03	3.982	06.05
28		6	5	10.06	.958	06.10
30		6	5	09.99	.934	06.06
Sept. 6		6	5	09.94	.836	06.10
7		6	5	09.75	.821	05.93
Means		6				18 32 06.030
July 12	27 Sagittarii φ	4.5	5	18 35 43 86	+4.213	18 35 39.65
13		4.5	5	43.78	.220	39.56
24		4.5	5	43.85	.277	39.57
Aug. 9		4.5	5	43.84	.235	39.61
24		4.5	5	43.71	.131	39.58
Sept. 6		4.5	5	43.41	3.958	39.45
7		4.5	5	43.31	.943	39.37
Oct. 3		4.5	5	43.38	4.059	39.32
4		4.5	5	43.27	.093	39.18
Means		4.5				18 35 39.477
Aug. 26	28 Sagittarii	6	5	18 36 45.52	+3.966	18 36 41.55
28		6	5	45.71	.941	41.77
Means		6				18 36 41.661

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				h. m. s.	*s.*	*h. m. s.*
Aug. 30	4 Aquilæ	5.6	5	16 36 48.79	+3.308	18 36 45.482
Aug. 26	111 Herculis M	5.6	5	18 40 00.22	+3.054	18 39 57.17
28		5.6	5	00 33	.028	57 30
Means		5.6				18 39 57.234
July 13	29 Sagittarii *r*	6	5	18 40 14.29	+4.012	18 40 10.28
24		6	5	14.35	.069	10.28
Aug. 9		6	5	14.31	.054	10.26
24		6	5	14.61	3.941	10.67
Means		6				18 40 10.373
Aug. 30	30 Sagittarii	6.7	5	18 41 17.35	+3.933	18 41 13.42
Sept. 6		6.7	5	17.22	.842	13.38
7		6	5	17.18	.827	13.35
Means		6.7				18 41 13.383
Aug. 25	32 Sagittarii ν^1	5.6	5	18 44 31.40	+4.028	18 44 30.37
26		5.6	5	34.16	.016	30.14
28		5.6	5	34.35	3.994	30.36
Means		5.6				18 44 30.290
July 12	34 Sagittarii σ	3	5	18 45 24.77	+4.207	18 45 20.56
13		3	5	24.91	.215	20.70
24		3	5	24.88	.280	20.60
Aug. 9		3	5	24.84	.264	20.58
21		3	5	24.77	.189	20.58
22		3	5	24.83	.181	20.65
24		3	5	24.77	.161	20.61
Sept. 6		3.4	5	24.48	3 996	20.48
7		3	5	24.50	.981	20.52
Oct. 4		3	5	23.91	.522	20.39
Means		3				18 45 20.567
Aug. 30	35 Sagittarii ν^2	5	5	18 45 30.71	+3.972	18 45 26.738
Aug. 30	Sagittarii	5	3	18 45 34.73	+3.993	18 45 30.737
Aug. 30	63 Serpentis θ^1	4.5	5	18 48 19.26	+3.316	18 48 15.94
Sept. 6		4.5	5	19.16	.226	15.93
7		4.5	5	19.23	.211	16.02
Means		4.5				18 48 15.963
Aug. 30	Serpentis θ^2	5	1	18 48 20.86	+3 316	18 48 17.54
Sept. 6		5	1	21.07	.226	17.84
7		5	3	20.68	.211	17.37
Means		5				18 48 17.586

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

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				h. m. s.	*s.*	*h. m. s.*
Aug. 25	9 Aquilæ *k*	5.6	5	18 48 33.35	+3.592	18 48 29.76
26		5.6	5	33.04	.582	29.46
28		5.6	5	33.31	.561	29.75
Means		5.6				18 48 29.657
July 13	64 Serpentis	6	5	18 49 17.37	+3.503	18 49 13.87
Aug. 22		6	5	17.24	.441	13.80
24		6	5	17.11	.421	13.69
Means		6				18 49 13.787
Aug. 30	2195 A. S. C.	6.7	5	18 52 03.05	+4.010	18 51 59.04
Sept. 6		6.7	5	02.73	3.921	58.81
Means		6 7				18 51 58.924
Aug. 25	38 Sagittarii ζ	4	5	18 52 30.41	+4.321	18 52 26.09
26		4	5	29.87	.309	25.56
28		4	5	30.05	.286	25.76
Oct. 4		3.4	5	29.33	3.680	25.65
Means		4				18 52 25.765
July 13	12 Aquilæ *i*	5.6	5	18 53 11.90	+3.664	18 53 08.34
24		5.6	5	11.88	.723	08.16
Aug. 9		5.6	5	11.95	.718	08.23
21		5.6	5	11.73	.646	08.08
22		5.6	5	11.76	.667	08.09
24		5.6	5	11 71	.620	08.09
Means		5.6				18 53 08.165
Aug. 25	39 Sagittarii *o*	4.5	5	18 55 10.01	+4 050	18 55 05.96
26		4.5	5	09.51	.040	05.47
28		4.5	5	09.60	.018	05.58
Means		4.5				18 55 05.670
Aug. 30	Aquilæ		1	18 56 33.25	+3.533	18 56 29.72
Sept. 6			3	33.20	.449	29.75
Means						18 56 29.734
Aug. 30	15 Aquilæ *h*	6	5	18 56 34.25	+3.533	18 56 30.72
Sept. 6		6	5	34.16	.449	30.71
7		6	5	34.20	.436	30.76
Means		6				18 56 30.730

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
June 17	40 Sagittarii τ	4	5	18 57 00.96	+3.873	18 56 57.09
Aug. 9		4	5	01.28	4.371	56.91
10		4	5	01.29	.368	56.92
21		4	5	01.28	.299	56.98
22		4	5	01.20	.290	56.91
24		4	5	01.17	.272	56.90
Means		4				18 56 56.952
July 13	17 Aquilæ ζ	3	5	18 58 06.70	+3.329	18 58 03.37
24		3	5	06.76	.375	03.39
Aug. 25		3	5	06.57	.225	03.35
26		3	5	06.51	.215	03.30
28		3	5	06.58	.195	03.39
30		3	5	06.58	.167	03.41
Sept. 6		3	5	06.47	.069	03.40
7		3	5	06.40	.055	03.35
Oct. 4		3	5	05.79	2.609	03.18
Means		3				18 58 03.348
Aug. 30	41 Sagittarii π	4.5	5	19 00 18.89	+4.000	19 00 14.89
Sept. 6		4.5	5	18.62	3.915	14.71
7		4.5	5	18.70	.902	14.80
Oct. 3		4.5	5	18.31	.489	14.82
4		4.5	5	18.24	.472	14.77
31		4.5	5	17.99	.046	14.94
Means		4.5				19 00 14.822
Aug. 9	19 Aquilæ	6	5	19 01 13.37	+3.499	19 01 09.87
10		6	5	13.08	.495	09.59
21		6	5	13.10	.423	09.68
22		6	5	13.01	.415	09.60
24		6	5	12.87	.397	09.47
Means		6				19 01 09.642
July 13	2224 A. S. C.	6.7	5	19 02 58.28	+4.083	19 02 54.20
Aug. 25		6.7	5	58.39	.085	54.31
26		6.7	5	58.41	.075	54.33
28		6.7	5	58.34	.055	54.28
Means		6.7				19 02 54.280
June 16	20 Aquilæ B	5	5	19 04 03.12	+3.327	19 03 59.79
July 14		5	5	03.62	.712	59.91
Aug. 3		5	5	03.58	.812	59.77
30		5.6	5	03.57	.660	59.91
Sept. 6		5.6	5	03.28	.579	59.70
Means		5				19 03 59.816

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Aug. 9	42 Sagittarii ψ	6	5	19 05 47.81	+4.316	19 05 43.49
10		6	5	47.91	.313	43.60
21		6	5	47.92	.253	43.67
22		6	5	47.95	.246	43.70
24		6	5	47.85	.229	43.62
Means		6				19 05 43.616
June 16	43 Sagittarii d	5	5	19 08 19.96	+3.572	19 08 16.39
July 14		5	5	20.33	4.016	16.31
Aug. 3		5	5	20.38	.121	16.26
25		5	5	20.29	.025	16.27
26		5	5	20.27	.016	16.25
28		5.6	5	20.28	3.998	16.28
29		5	5	20.51	.987	16.52
Oct. 4		5	5	19.79	.464	16.33
Means		5				19 08 16.327
Aug. 30	1 Sagittæ	6	5	19 08 26.75	+3.064	19 08 23.69
Sept. 6		6	5	26.87	2.964	23.91
7		6	3	27.08	.949	24.13
Means		6				19 08 23.910
Aug. 9	25 Aquila ω^1	5.6	5	19 10 21.62	+3.422	19 10 18.20
10		5.6	5	21.89	.420	18.47
21		5.6	5	21.64	.349	18.29
22		5.6	5	21.72	.341	18.38
Means		5.6				19 10 18.335
Aug. 30	Sagittarii β^2	4	5	19 11 44.02	+5.123	19 11 38.90
Sept. 6		4	5	43.88	.010	38.87
Means		4				19 11 38.883
June 16	26 Aquilæ *f*	6	5	19 12 03.51	+3.571	19 11 59.94
July 13		6	5	03.96	.669	12 00.29
Aug. 3		6	5	04.04	.773	00.27
25		6	5	04.03	.679	00.35
26		6	5	04.01	.664	00.34
29		6	5	04.05	.643	00.41
Means		6				19 12 00.267
Oct. 3	Sagittarii *d*	4.5	5	19 12 51.22	+4.249	19 12 46.97
4		5	5	51.21	.227	46.98
Means		4.5				19 12 46.977

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Aug. 30	2255 A. S. C.	6	5	19 14 35.72	+4.307	19 14 31.41
Sept. 6		6	5	35.54	.223	31.32
Means		6				19 14 31.365
July 13	47 Sagittarii χ^1	6	5	19 15 36.14	+4.188	19 15 31.95
14		6	5	36.18	.201	31.98
Aug. 9		6	5	36.47	.321	32.15
10		6	1	36.42	.320	32.10
21		6	5	36.46	.291	32.17
Means		6				19 15 32.070
Aug. 25	49 Sagittarii χ^3	6.7	5	19 15 52.83	+4.221	19 15 48.61
26		6	5	52.65	.212	48.44
29		6	5	52.79	.183	48.61
Means		6				19 15 48.553
May 18	30 Aquilæ δ	3.4	5	19 17 28.25	+2.407	19 17 25.84
June 16		3.4	5	28.89	3.100	25.79
17		3.4	5	28.95	.121	25.83
July 14		3.4	5	29.45	.508	25.94
Aug. 3		3.4	5	29.40	.603	25.80
9		3.4	5	29.43	.607	25.82
21		3.4	5	29.36	.539	25.82
22		3.4	5	29.28	.531	25.75
24		3.4	5	29.35	.515	25.84
25		3.4	5	29.23	.507	25.72
26		3.4	3	29.19	.499	25.69
28		3.4	5	29.28	.483	25.80
29		3.4	5	29.35	.472	25.88
30		3.4	5	29.30	.461	25.84
Sept. 6		3.4	5	29.26	.384	25.88
7		3.4	5	29.22	.373	25.85
23		3.4	5	28.97	.147	25.82
Oct. 4		3.4	5	28.92	2.971	25.95
31		3.4	1	28.45	.517	25.93
Means		3.4				19 17 25.830
July 13	Aquilæ	6	5	19 20 22.14	+3.555	19 20 18.59
14		6	5	22.29	.564	18.73
Aug. 3		6	5	22.24	.662	18.58
Means		6				19 20 18.633
June 16	35 Aquilæ c	6	5	19 20 58.59	+3.114	19 20 55.48
Aug. 21		6	5	59.01	.579	55.43
22		6	5	58.99	.571	55.42
24		6	5	59.15	.557	55.59
Means		6				19 20 55.480

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Aug. 30	2276 A. S. C.	6.7	5	19 21 28.13	+4.112	19 21 24.018
Aug. 25	6 Vulpeculæ *b*	4.5	5	19 22 05.91	+3.115	19 22 02.80
26		4.5	5	05.93	.102	02.83
29		5	5	05.87	.067	02.80
Oct. 3		4.5	5	04 88	2.476	02.40
4		4.5	5	04.90	.455	02.45
Means		4.5				19 22 02.656
Aug. 25	8 Vulpeculæ		2	19 22 19.94	+3.114	19 22 16.83
26			1	19.51	.102	16.41
29		6	1	19.69	.067	16.62
Means		6				19 22 16.620
June 16	6 Cygni β^1	3	5	19 24 18.73	+2.979	19 24 15.75
17		3	5	18.86	.998	15.86
July 14		3	5	19.32	3.171	16.15
Aug. 3		3	5	19.36	.220	16.14
10		3	5	19.57	.193	16.38
21		3	5	19.17	.107	16.06
22		3	5	19.21	.097	16.11
24		3	5	19.19	.075	16.12
Sept. 6		3	5	19.13	2.900	16.23
7		3	5	19.42	.884	16.54
Oct. 31		3	5	17.69	1.845	15.85
Means		3				19 24 16.107
Sept. 6	Cygni	4.5	2	19 24 21.46	+2.900	19 24 18.56
7		4.5	2	21.41	.884	18.53
Means		4.5				19 24 18.543
Aug. 30	2283 A. S. C.	6.7	5	19 25 08.33	+3.195	19 25 05.135
Aug. 25	51 Sagittarii h^1	6	5	19 26 22.79	+4.293	19 26 18.50
26		6	5	22.78	.284	18.50
29		6	5	22.83	.258	18.57
Means		6				19 26 18.523
June 16	52 Sagittarii h^2	4.5	5	19 27 01.70	+3.706	19 26 57.99
17		4.5	5	01.72	.728	57.99
July 13		4.5	5	01.98	4.207	57.77
Aug. 21		5.6	5	02.27	.330	57.94
22		4.5	5	02.19	.323	57.87
24		5	5	02.25	.309	57.94
Sept. 6		5	5	02.21	.257	57.95
7		6	5	02.06	.245	57.81
Oct. 3		4.5	5	01.74	3.848	57.89
4		4.5	5	01.60	.831	57.77
Means		5				19 26 57.892

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Aug. 30	39 Aquilæ κ	5	5	19 28 20.65	+3.740	19 28 16.910
Aug. 25	4 Sagittæ ε	6	5	19 30 05.99	+3.293	19 30 02.70
26		6	5	06.14	.284	02.86
29		6	5	06.01	.254	02.76
Means		6				19 30 02.773
July 14	44 Aquilæ σ	6	5	19 31 21.23	+3.475	19 31 17.755
Aug. 30	45 Aquilæ	6	5	19 32 32.33	+3.605	19 32 28.73
Sept. 6		6	5	32.33	.534	28.80
7		6	5	32.36	.524	28.84
Means		6				19 32 28.790
Oct. 3	5 Sagittæ α	4	5	19 32 59.15	+2.711	19 32 56.44
4		4	5	59.18	.693	56.49
Means		4				19 32 56.463
June 16	12 Cygni φ	5	5	19 33 05.94	+2.746	19 33 03.19
17		4	5	06.10	.765	03.34
Aug. 21		4	5	06.63	3.100	03.53
22		4	5	06.56	.091	03.47
24		4	5	06.55	.070	03.48
Means		4				19 33 03.402
July 14	6 Sagittæ β	5	5	19 33 54.90	+3.292	19 33 51.61
Aug. 25		5	5	54.91	.289	51 62
26		5	5	55.00	.279	51.72
29		5	5	55.03	.249	51.78
Means.		5				19 33 51.683
May 21	50 Aquilæ γ	3	5	19 38 41.65	+2.295	19 38 39 36
June 16		3	5	42.18	.942	39.24
17		3	5	42.18	.964	39.22
July 14		3	5	42.54	3.383	39.16
Aug. 11		3	5	42.57	.499	39.07
21		3	5	42.61	.457	39.15
22		3	5	42.56	.450	39.11
24		3	5	42.49	.436	39.05
26		3	5	42.58	.422	39.16
29		3	5	42.61	.398	39.21
30		3	5	42.50	.388	39.11
Sept. 6		3	5	42.55	.318	39.23

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Sept. 7	50 Aquilæ γ cont'd.	3	5	19 38 42.50	+3.308	19 38 39.19
23		3	5	42.22	.088	39.13
Oct. 3		3	5	42.07	2.936	39.13
4		3	5	42.05	.909	39.14
5		3	5	41.95	.892	39.06
31		3	5	41.57	.472	39.10
Means		3				19 38 39.157
Sept. 6	57 Sagittarii	6	5	19 42 57.85	+4.064	19 42 53.79
7		5.6	5	57.85	.054	53.80
Means		5.6				19 42 53.791
May 21	53 Aquilæ α	1.2	5	19 43 00.69	+2.312	19 42 58.38
June 16		1.2	5	01.44	.966	58.47
17		1.2	5	01.50	.989	58.51
July 14		1.2	5	01.94	3.430	58.51
15		1.2	5	02.09	.441	58.65
Aug. 11		1.2	5	02.09	.559	58.53
21		1.2	5	02.03	.527	58.50
22		1.2	5	02.10	.521	58.58
24		1.2	5	02.05	.509	58.54
25		1.2	5	02.13	.503	58.63
26		1.2	5	01.99	.497	58.49
29		1.2	5	01.81	.484	58.33
30		1.2	5	01.96	.465	58.50
Sept. 21		1.2	5	01.73	.205	58.53
23		1.2	5	01.70	.175	58.53
Oct. 3		1.2	5	01.57	.019	58.55
4		1.2	5	01.29	.003	58.29
5		1.2	5	01.57	2.987	58.58
Means		1.2				19 42 58.502
May 21	60 Aquilæ β^1	3.4	5	19 47 29.52	+2.310	19 47 27.21
June 16		3.4	5	30.16	.973	27.19
17		3.4	5	30.14	.996	27.14
July 14		3.4	5	30.57	3.447	27.12
15		3.4	5	30.70	.458	27.24
Aug. 11		3.4	5	30.80	.596	27.20
21		3.4	5	30.67	.567	27.10
22		3.4	5	30.80	.562	27.24
24		3.4	5	30.79	.552	27.24
25		3.4	5	30.83	.547	27.28
26		3.4	5	30.99	.542	27.45
29		3.4	5	30.79	.522	27.27
30		3.4	5	30.68	.512	27.17
Sept. 6		3.4	5	30.60	.442	27.16
7		3.4	5	30.61	.432	27.18
21		3.4	5	30.51	.256	27.25
23		3.4	5	30.53	.228	27.30

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Oct. 3	60 Aquilæ β^1	3.4	5	19 47 30.29	+3.076	19 47 27.21
4	cont'd.	3.4	5	30.23	.060	27.17
5		3.4	5	30.37	.044	27.33
31		3.4	5	29.78	2.636	27.14
Nov. 1		3.4	5	29.72	.622	27.10
Means		3.4				19 47 27.213
Aug. 25	11 Sagittæ	6	5	19 50 32.93	+3.357	19 50 29.57
26		6	5	32.99	.349	29.64
29		6	5	32.99	.325	29.67
Means		6				19 50 29.627
Aug. 30	12 Sagittæ γ	4.5	5	19 51 41.83	+3.269	19 51 38.56
Sept. 6		4.5	5	41.77	.194	38.58
7		4.5	5	41.62	.181	38.44
Means		4.5				19 51 38.527
May 21	62 Sagittarii c	4.5	5	19 52 51.16	+2.933	19 52 48.23
June 16		4.5	5	52.47	3.724	48.75
17		4.5	5	52.44	.751	48.69
Aug. 11		5	5	53.11	4.541	48.57
21		4.5	5	53.45	.526	48.92
24		5	5	53.29	.512	48.78
Oct. 4		5	4	52.69	3.998	48.69
5		5	5	52.88	.981	48.90
31		4.5	5	52.52	.533	48.99
Nov. 1		4.5	5	52.34	.517	48.82
Means		4.5				19 52 48.734
Aug. 25	15 Vulpeculæ g	5	5	19 54 33.94	+3.179	19 54 30.76
26		5	5	33.99	.170	30.82
29		5	5	33.79	.139	30.65
Means		5				19 54 30.743
Aug. 30	2358 A. S. C.	6	5	19 55 01.20	+3.183	19 54 58.02
Sept. 6		6	5	01.11	.104	58.01
7		6	5	01.16	.091	58.07
Means		6				19 54 58.033
July 14	16 Vulpeculæ h	6	5	19 55 17.41	+3.186	19 55 14.22
Aug. 30		5	1	18.22	.182	15.04
Sept. 6		5	4	17.84	.103	14.74
7		5	3	17.74	.089	14.65
Means		5				19 55 14.662

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. *m.* *s.*	*s.*	*h.* *m.* *s.*
Aug. 11	63 Aquilæ τ	5.6	5	19 56 22.86	+3.599	19 56 19.26
Oct. 5		5.6	5	22.37	2.904	19.47
Means		5.6				19 56 19.363
Aug. 21	65 Sagittarii	6.7	5	19 56 36.27	+4.039	19 56 32.23
24		6.7	5	36.45	.026	32.42
Means		6.7				19 56 32.337
July 14	17 Vulpeculæ *i*	5.6	5	20 00 04.15	+3.199	20 00 00.95
Aug. 11		5.6	5	04.44	.334	01.11
21		5.6	5	04.09	.296	00.79
24		5.6	5	04.13	.277	00.85
Sept. 7		5.6	5	04.25	.137	01.11
Nov. 1		5.6	5	03.24	2.202	01.04
Means		5.6				20 00 00.975
May 21	65 Aquilæ θ	3.4	5	20 03 05.17	+2.339	20 03 02.83
Oct. 4		3.4	5	06.36	3.307	03.05
5		3.4	5	06.10	.292	02.81
Means		3.4				20 03 02.897
Aug. 11	18 Vulpeculæ	6	5	20 03 56.32	+3.294	20 03 53.03
21		6	5	56.09	.255	52.84
24		6	5	55.93	.234	52.70
Sept. 7		6	5	56.25	.192	53.06
Means		6				20 03 52.908
Nov. 1	19 Vulpeculæ	6	5	20 05 09.02	+2.134	20 05 06.896
July 14	5 Capricorni α^1	4	5	20 08 50.07	+3.826	20 08 46.144
May 21	6 Capricorni α^2	3	5	20 09 12.80	+2.515	20 09 10.29
June 17		3	5	13.59	3.273	10.32
July 15		3	5	14.38	.835	10.55
Aug. 11		3	5	14.39	4.061	10.33
21		3	5	14.54	.066	10.47
24		3	5	14.41	.057	10.35
Sept. 7		3	5	14.22	3.975	10.25
Oct. 4		3	5	14.28	.637	10.64
5		3	5	13.84	.623	10.22
Nov. 1		3	5	13.61	.215	10.40
Means		3				20 09 10.382
May 21	9 Capricorni β^2	3.4	5	20 12 03.33	+2.538	20 12 00.79
June 17		3.4	5	04.29	.960	01.33
July 14		3.4	5	04.82	3.881	00.94

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires ob served.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h m. s.
July 15	9 Capricorni θ^2 cont'd.	3.4	5	20 12 05.00	+3.897	20 12 01.10
Aug. 11		3.4	5	05.06	4.134	00.93
21		3.4	5	05.02	.137	00.88
24		3.4	5	05.03	.128	00.90
Oct. 4		3.4	5	04.93	3.708	01.22
5		3.4	5	04.75	.693	01.06
Nov. 1		3	5	04.38	.081	01.30
Means		3.4				20 12 01.045
May 21	25 Vulpeculæ	6	5	20 15 12.85	+2.262	20 15 10.59
June 17		6	5	13.15	.672	10.48
Sept. 8		6	5	14.09	3.176	10.91
Means		6				20 15 10.660
July 14	10 Capricorni π	5.6	3	20 18 13.06	+3.969	20 18 09.09
15		5	5	13.58	.985	09.60
Aug. 11		5	3	13.30	4.245	09.06
Sept. 7		5	5	13.43	.168	09.26
8		5	5	13.64	.159	09.48
Oct. 5		5	5	13.17	3.821	09.35
Nov. 1		5	5	12.97	.400	09.57
2		5	5	12.51	.384	09.13
Means		5				20 18 09.318
May 21	Capricorni *f*	6	5	20 20 09.89	+2.657	20 20 07.23
June 17		6	5	10.95	3.091	07.86
Aug. 11		6	5	11.85	4.384	07.47
Means		6				20 20 07.520
July 14	41 Cygni *i*	4.5	5	20 22 54.87	+3.101	20 22 51.77
15		4.5	5	54.66	.115	51.55
Sept. 7		4.5	5	54.84	.112	51.73
8		4.5	5	54.82	.100	51.72
Oct. 5		4.5	5	54.13	2.668	51.46
Means		4.5				20 22 51.646
May 21	2 Delphini ε	4	5	20 25 36.41	+2.049	20 25 34.36
Aug. 11		4	5	37.58	3.573	34.01
Means		4				20 25 34.184
June 17	3 Delphini η	6	5	20 26 25.69	+2.804	20 26 22.89
July 14		6	5	26.31	3.309	23.00
15		6	5	26.30	.323	22.98
Sept. 7		6	5	26.44	.449	22.99
8		6	5	26.54	.441	23.10
Oct. 5		6	5	26.07	.098	22.97

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Nov. 1	3 Delphini η cent'd.	6	5	20 26 25.73	+2.672	20 26 23.06
2		6	5	25.49	.657	22.83
Means		6				20 26 22.978
May 21	6 Delphini β	4	5	20 30 04.86	+1.980	20 30 02.880
Aug. 11	71 Aquilæ I	5	5	20 30 08.15	+3.815	20 30 04.335
June 17	15 Capricorni ν	5	5	20 30 59.48	+3.327	20 30 56.15
July 14		5	5	31 00.16	.944	56.22
15		5	5	00.08	.961	56.12
Sept. 7		5	5	00.23	4.207	56.02
8		5	5	00.35	.199	56.15
Oct. 5		5	5	00.18	3.881	56.30
Nov. 1		5	5	30 59.72	.467	56.25
2		5	5	59.38	.451	55.93
Means		5				20 30 56.142
May 21	9 Delphini α	3.4	5	20 32 14.37	+1.951	20 32 12.419
June 17	10 Delphini	6	5	20 33 49.42	+2.723	20 33 46.697
May 21	11 Delphini δ	5	5	20 36 01.35	+1.942	20 35 59.41
July 15		5	5	02.68	3.279	59.40
Sept. 8		5	5	02.85	.437	59.41
Oct. 5		5	5	02.32	.105	59.22
Nov. 2		5	5	01.89	2.663	59.23
Means		5				20 35 59 334
June 17	30 Vulpeculæ	6	5	20 37 59.54	+2.575	20 37 56.965
May 21	2 Aquarii ε	4.5	5	20 39 02.55	+2.297	20 39 00.253
Aug. 11	13 Delphini λ	6	5	20 39 56.36	+3.682	20 39 52.678
July 15	Microscopii α	4.5	5	20 40 02.10	+4.511	20 39 57.59
Oct. 5		5	5	02.31	.462	57.85
6		5	5	02.02	.436	57.58
Nov. 2		4.5	5	01.64	3.958	57.68
Means		4.5				20 39 57.675
July 15	5 Aquarii	6	5	20 43 44.34	+3.431	20 43 40.91
Oct. 6		6	5	44.42	.597	40.82
Means		6				20 43 40.866
Aug. 11	6 Aquarii μ	4.5	5	20 44 05.18	+4.006	20 44 01.17
Nov. 2		5	5	04.44	3.293	01.15
Means		4.5				20 44 01.160

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1840.
				h. m. s.	s.	h. m. s.
July 15	32 Vulpeculæ *q*	4.5	5	20 47 47.56	+3.102	20 47 44.46
Aug. 11		5	5	48.08	.353	44.73
Oct. 5		5	5	47.44	2.888	44.55
6		4.5	5	47.46	.870	44.59
Nov. 2		4.5	5	46.89	.385	44.51
Means		4.5				20 47 44.568
Aug. 11	1 Equulei ε	5.6	5	20 51 08.33	+3.723	20 51 04.607
July 15	33 Vulpeculæ *x*	5.6	5	20 51 09.90	+3.161	20 51 06.74
Oct. 5		5.6	5	10.12	.035	07.08
6		5.6	5	10.35	.019	07.33
Means		5.6				20 51 07.050
Nov. 2	21 Capricorni	6	5	20 51 54.50	+3.547	20 51 50.953
Aug. 11	22 Capricorni η	5	5	20 55 21.64	+4 315	20 55 17.33
Oct. 5		5	5	21.64	.045	17.60
6		5	5	21.39	.031	17.36
Means		5				20 55 17.430
Sept. 8	3 Equulei ζ	6	5	20 56 40.37	+3.692	20 56 36.678
Aug. 11	25 Capricorni χ^1	5.6	5	20 59 27.34	+4.356	20 59 22.984
July 15	13 Aquarii ν	5	5	21 00 55 92	+3.716	21 00 52.20
Sept. 8		5	5	56.50	4.090	52.41
Oct. 5		5	5	56.54	3.835	52.71
6		5	5	56.18	.822	52.36
Means		5				21 00 52.560
Aug. 11	5 Equulei γ	5	5	21 02 37.23	+3.626	21 02 33.604
Oct. 6	3 Piscis Aust.	6	5	21 03 41.65	+4.249	21 03 37.401
May 21	64 Cygni ζ	3	5	21 06 09.38	+1.561	21 06 07.82
July 15		3	5	10.78	3.046	07.73
17		3	5	10.95	.082	07.87
Aug. 11		3	5	11.23	.340	07.89
Nov. 2		3	3	10 28	2.470	07.81
Means		3				21 06 07.824
Oct. 5	29 Capricorni ε	6	5	21 06 57.31	+4.060	21 06 53.25
6		5.6	5	56.78	.047	52.73
7		5.6	5	57.04	.035	53.01
Means		5.6				21 06 52.997

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Sept. 8	30 Capricorni *r*	6	5	21 09 02.55	+4.295	21 08 58.255
July 15	31 Capricorni	7	5	21 09 21.74	+3.847	21 09 17.893
July 15	32 Capricorni ι	5	5	21 13 23.57	+3.816	21 13 19.75
17		5	5	23.67	.858	19.81
Sept. 8		5	5	23.21	4.269	19.94
Oct. 6		5	5	23.63	.020	19.61
7		5	5	23.79	.008	19.78
Means		5				21 13 19.778
Nov. 2	18 Aquarii A	6	5	21 15 30.17	+3.553	21 15 26.617
Oct. 6	21 Aquarii	6	5	21 16 59.68	+3.705	21 16 55.975
July 15	34 Capricorni ζ	4	5	21 17 35.27	+3.961	21 17 31.31
16		4	5	35.40	.984	31.42
Sept. 8		4	5	35.93	4.453	31.48
Means		4				21 17 31.403
Nov. 2	36 Capricorni *b*	5.6	5	21 19 39.24	+3.799	21 19 35.44
3		5.6	5	39.49	.785	35.70
Means		5.6				21 19 35.573
July 15	22 Aquarii β	3	5	21 23 11.27	+3.523	21 23 07.75
16		3	5	11.44	.543	07.90
17		3	5	11.41	.563	07.85
Sept. 8		3	5	11 98	.998	07.98
Oct. 7		3	5	11.72	.773	07.99
Nov. 2		3	5	11.35	.429	07.92
3		3	5	11.25	.415	07.84
Means		3				21 23 07.890
June 19	8 Piscis Aust.	5.6	5	21 26 56.81	+3.320	21 26 53.49
Sept. 8		6	5	58.34	4.597	53.74
Means		5.6				21 26 53.616
July 15	39 Capricorni ε	5	5	21 28 10.65	+3.835	21 28 06.82
16		5	5	10.98	.859	07.12
17		5	5	10.58	.881	06.70
Oct. 6		5	5	10.60	4 139	06.46
Nov. 2		5.6	5	10.58	3.780	06.80
3		5.6	5	10.58	.764	06.82
Means		5				21 28 06.787

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
June 19	40 Capricorni γ	4	5	21 31 16.11	+2.840	21 31 13.27
Sept. 8		4	5	17.37	4.364	13.01
Oct. 6		4	5	17.20	.086	13.11
Nov. 2		4	5	17.01	3.723	13.29
3		4	5	16.80	.708	13.09
Means		4				21 31 13.154
July 16	42 Capricorni d^1	6	5	21 32 54.31	+3.701	21 32 50.609
June 19	7 Pegasi T^2	5.6	5	21 34 17.59	+2.647	21 34 14.943
July 16	8 Pegasi ε	2.3	5	21 36 23.01	+3.245	21 36 19.76
17		2.3	5	23.00	.266	19.73
Sept. 10		2.3	3	23.26	.704	19.56
Nov. 2		2.3	5	22.90	.174	19.73
3		3	5	22.85	.160	19.69
Dec. 1		2.3	5	22.50	2.813	19.69
Means		2.3				21 36 19.693
June 19	49 Capricorni δ	3.4	5	21 38 15.05	+3.008	21 38 12.04
Oct. 6		3.4	5	15.69	4.095	11.60
7		3.4	5	16.15	.084	12.07
Nov. 2		3.4	5	15.78	3.744	12.04
3		3.4	5	15.87	.729	12.14
Means		3.4				21 38 11.978
July 16	11 Pegasi	5.6	5	21 39 10.29	+3.348	21 39 06.942
June 19	51 Capricorni μ	5	5	21 44 36.89	+2.920	21 44 33.97
July 16		5	5	37.65	3.646	34.00
17		5	5	37.48	.669	33.81
Oct. 6		5	5	37.68	4.050	33.63
7		5	5	38.00	.040	33.96
Nov. 2		5	5	37.71	3.713	34.00
3		5	5	37.84	.699	34.14
Dec. 1		5	5	37.29	.346	33.94
Means		5				21 44 33.931
June 19	17 Pegasi	6	5	21 49 10.75	+2.262	21 49 08.49
Oct. 6		6	5	11.59	3.539	08.05
7		6	5	11.84	.530	08.31
Nov. 3		6	5	11.34	.192	08.15
Dec. 1		6	5	11.27	2.832	08.44
Means		6				21 49 08.288
June 19	20 Pegasi	6	5	21 53 20.05	+2.225	21 53 17.83
Oct. 6		5.6	5	21.31	3.541	17.77
7		5.6	5	21.12	.530	17.59
Means		5.6				21 53 17.730

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
July 17	29 Aquarii x	6	5	21 53 44.29	+3.713	21 53 40.577
Dec. 1	30 Aquarii	6	5	21 54 54.36	+3.255	21 54 51.105
June 19	34 Aquarii α	3	5	21 57 36.37	+2.624	21 57 33.75
Nov. 4		3	5	37.31	3.478	33.83
Dec. 1		3	5	36.87	.154	33.72
Means		3				21 57 33.767
July 17	33 Aquarii ι	4.5	5	21 57 50.94	+3.622	21 57 47.32
Oct. 6		4.5	5	51.31	4.101	47.21
7		4.5	5	51.39	.092	47.30
Means		4.5				21 57 47.277
July 17	37 Aquarii	6	5	22 02 02.80	+3.539	22 01 59.26
Oct. 7		6.7	5	03.40	4.034	59.37
Nov. 4		7	5	03.03	3.710	59.32
Dec. 1		6.7	5	02.72	.367	59.35
Means		6.7				22 01 59.325
June 19	Piscis Aust. φ	5.6	5	22 04 47.37	+2.795	22 04 44.575
July 17	16 Piscis Aust. λ	6	5	22 05 17.70	+3.961	22 05 13.739
Oct. 7	41 Aquarii F	6	5	22 05 31.65	+4.307	22 05 27.34
Dec. 1		6	5	30.74	3.597	27.14
Means		6				22 05 27.243
June 19	43 Aquarii θ	4.5	5	22 08 25.67	+2.448	22 08 23.22
20		4.5	5	25.60	.713	22.89
July 17		4.5	5	26.48	3.507	22.97
Nov. 3		4.5	5	26.92	.689	23.23
4		4.5	5	27.01	.678	23.33
Means		4.5				22 08 23.128
Oct. 7	45 Aquarii D	6	5	22 10 29.40	+4.118	22 10 25.28
Dec. 1		6	5	28.45	3.465	24.98
Means		6				22 10 25.133
June 19	30 Pegasi	6	5	22 12 26.95	+2.458	22 12 24.49
20		5	5	26.95	.487	24.46
July 17		5	5	27.52	3.216	24.30

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Nov. 3	30 Pegasi cont'd.	5	5	22 12 28.11	+3.453	22 12 24.66
4		5	5	28.01	.440	24.57
Means		5				22 12 24.496
Oct. 7	49 Aquarii	6	5	22 14 39.73	+4.439	22 14 35.29
Dec. 1		6	5	38.88	3.714	35.17
Means		6				22 14 35.228
June 19	50 Aquarii	6	5	22 15 55.09	+2.737	22 15 52.35
20		6	5	55.20	.768	52.43
Means		6				22 15 52.392
July 17	52 Aquarii π	5	5	22 17 09.23	+3.227	22 17 06.00
Nov. 3		5	5	09.97	.558	06.41
4		5	5	09.82	.547	06.27
Means		5				22 17 06.227
June 19	34 Pegasi H^1	5.6	5	22 18 31.24	+2.445	22 18 28.80
20		6	5	31.18	.475	28.71
Oct. 7		5.6	5	32.71	3.791	28.92
Dec. 1		6	5	32.15	.179	28.97
Means		5.6				22 18 28.850
July 17	55 Aquarii ζ	5	5	22 20 38.61	+3.273	22 20 35.337
June 19	57 Aquarii σ	5	5	22 22 13.01	+2.648	22 22 10.36
20		5	5	13.11	.679	10.43
Sept. 11		5	5	14.67	4.186	10.47
Nov. 3		5	5	14.52	3.812	10.71
4		5	5	14.41	.800	10.61
Dec. 1		5	5	13.96	.473	10.49
Means		5				22 22 10.512
July 17	39 Pegasi K	6	5	22 24 54.60	+2.999	22 24 51.601
June 20	59 Aquarii ν	5.6	5	22 25 58.65	+2.838	22 25 55.81
Sept. 10		5	5	26 00.67	4.619	56.05
11		6	5	00 56	.621	55.94
Nov. 4		5	5	00.11	.169	55.94
Means		5.6				22 25 55.935
Aug. 14	62 Aquarii η	4	5	22 27 11.77	+3.778	22 27 07.99
16		4	5	11.84	.804	08.04
Oct. 7		4	5	11.93	.900	08.03
8		4	5	11.64	.893	07.75
Means		4				22 27 07.948

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
June 20	63 Aquarii κ	6	5	22 29 30.80	+2.537	22 29 28.26
July 17		5	5	31.18	3.302	27.88
Sept. 11		5.6	5	32.22	4.058	28.16
Nov. 4		6	5	31.88	3.712	28.17
Dec. 1		6	5	31.53	.396	28.13
2		6	5	31.39	.386	28.00
Means		6				22 29 28.100
June 19	42 Pegasi ζ	3	5	22 33 31.30	+2.286	22 33 29.01
20		3	5	31.29	.316	28.97
Aug. 14		3	5	32.71	3.610	29.10
16		3	5	32.73	.638	29.09
Oct. 7		3	5	32.73	.756	28.97
8		3	5	32.54	.748	28.79
Nov. 4		3	5	32.55	.488	29.06
Dec. 1		3	5	32.26	.171	29.09
2		3	5	32.14	.160	28.98
Means		3				22 33 29.007
June 19	44 Pegasi η	3	5	22 35 32.62	+2.036	22 35 30.58
20		3	5	32.73	.069	30.66
Means		3				22 35 30.622
Aug. 14	20 Piscis Aust. ψ^1	6	5	22 36 49.15	+4.319	22 36 44.83
16		6	5	49.36	.350	45.01
Oct. 8		7	5	49.43	.489	44.94
Means		6				22 36 44.927
Sept. 11	45 Pegasi	6	5	22 37 45.20	+3.731	22 37 41.47
Nov. 4		6	5	44.76	.377	41.38
Dec. 1		6	5	44.57	.036	41.53
2		6	5	44.46	.024	41.44
Means		6				22 37 41.455
July 17	47 Pegasi λ	4.5	5	22 38 52.55	+2.923	22 38 49.627
Aug. 16	70 Aquarii	6	5	22 40 08.69	+3.969	22 40 04.721
Sept. 10	71 Aquarii τ^2	5.6	5	22 41 11.27	+4.252	22 41 07.02
11		5	5	11.11	.255	06.86
Oct. 7		5	5	11.20	.203	07.00
8		5	5	10.83	.197	06.63
Dec. 1		4	5	10.41	3.616	06.79
2		4.5	5	10.19	.605	06.59
Means		5				22 41 06.812

REDUCTIONS TO MEAN RIGHT ASCENSION, JANUARY 1, 1840.

Date	Star	Mag.	No. of wires observed.	Obs'd app. R.A.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Nov. 4	48 Pegasi μ	4	5	22 42 20.41	+3.334	22 42 17.08
5		4	5	20.52	.321	17.20
Means		4				22 42 17.137
June 19	73 Aquarii λ	4	5	22 44 19.17	+3.467	22 44 15.70
20		4	5	19.35	.498	15.85
July 17		4	5	18.97	3.291	15.68
Aug. 14		4	5	19.47	.873	15.60
16		4	5	19.74	.902	15.84
Sept. 10		4	3	20.00	4.126	15.87
11		4	5	19.93	.130	15.80
Oct. 7		4	5	20.06	.090	15.97
8		4	5	19.80	.082	15.72
Dec. 1		4	5	19.49	3.531	15.96
2		4	5	19.39	.520	15.87
Means		4				22 44 15.805
June 19	24 Piscis Aust. α	1	5	22 48 50.51	+2.821	22 48 47.69
20		1	3	50.49	.856	47.63
July 17		1	5	51.66	3.741	47.92
Aug. 14		1	6	52.00	4.399	47.60
16		1	5	52.24	.435	47.81
Sept. 10		1	5	52.46	.593	47.87
11		1	5	52.41	.597	47.81
Oct. 8		1	5	52.27	.643	47.63
Nov. 3		1	5	52.15	.360	47.79
5		1	5	52.00	.334	47.67
Dec. 1		1	5	51.62	3.961	47.66
2		1	5	51.52	.947	47.57
Means		1				22 48 47.721
July 17	3 Piscium x^2	6	5	22 52 28.53	+3.135	22 52 25.39
Aug. 14		6	5	29.26	.724	25.54
16		6	5	29.22	.754	25.47
Sept. 10		6	5	29.70	.993	25.71
11		6.7	5	29.47	.997	25.47
Oct. 8		6	5	29.54	.970	25.57
Nov. 4		6	5	29.26	.750	25.51
5		6	5	29.24	.740	25.50
Dec. 1		6	5	29.15	.453	25.70
2		6	5	28.85	.442	25.41
Means		6				22 52 25.527
June 19	54 Pegasi α	2	5	22 56 49.91	+2.110	22 56 47.80
20		2	5	49.92	.142	47.78
July 17		2	5	50.35	.936	47.41
Aug. 14		2	5	51.29	3.526	47.76
16		2	5	51.14	.558	47.58

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Sept. 8	54 Pegasi α	2	5	22 56 51.41	+3.794	22 56 47.62
10	cont'd.	2	5	51.53	.802	47.78
11		2	5	51.51	.806	47.70
Oct. 6		2	5	51.56	.803	47.76
8		2	5	51.56	.794	47.77
Nov. 3		2	5	51.30	.580	47.72
4		2	5	51.39	.570	47.82
5		2	5	51.25	.560	47.69
Dec. 1		2	5	51.05	.260	47.79
2		2	5	51.03	.249	47.78
Means		2				22 56 47.717
Sept. 10	5 Piscium A	6	5	23 00 33.22	+3.966	23 00 29.25
11		6	5	33.17	.971	29.20
Dec. 2		6	5	32.71	.462	29.25
Means		6				23 00 29.233
Aug. 14	88 Aquarii c^2	4.5	5	23 00 58.34	+4.109	23 00 54.23
16		4.5	5	58.60	.143	54.46
Oct. 8		4.5	5	58.56	.412	54.15
Nov. 4		4.5	5	58.65	.170	54.48
5		4.5	5	58.33	.158	54.17
Means		4.5				23 00 54.298
Aug. 14	59 Pegasi *p*	5.6	5	23 03 43.30	+3.591	23 03 39.71
16		5.6	5	43.12	.624	39.50
Means		5.6				23 03 39.602
Oct. 8	60 Pegasi	6	5	23 04 07.74	+3.712	23 04 04.03
Nov. 4		6	5	07.07	.476	03.59
5		6	5	07.19	.464	03.73
Dec. 2		6	5	06.87	.119	03.75
Means		6				23 04 03.775
Sept. 10	90 Aquarii φ	5	5	23 06 06.45	+4.093	23 06 02.36
11		5	5	06.20	.099	02.10
Means		5				23 06 02.229
Oct. 8	61 Pegasi	6	5	23 08 01.99	+3.966	23 07 58.02
Dec. 2		6	5	01.15	.133	58.02
Means		6				23 07 58.020
Aug. 16	6 Piscium γ	4.5	5	23 08 55.88	+3.721	23 08 52.16
Nov. 4		4.5	5	56.20	.841	52.36
5		4.5	5	55.93	.832	52.10
Means		4.5				23 08 52.207

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Sept. 11	Ap. Sculp. γ	5	5	23 10 15.14	+4.761	23 10 10.379
Dec. 2	96 Aquarii	6	5	23 11 09.52	+3.623	23 11 05.897
Aug. 14	62 Pegasi τ	5.6	5	23 12 46.89	+3.448	23 12 43.44
Nov. 5		5.6	5	47.00	.566	43.44
Means		5.6				23 12 43.443
Sept. 11	98 Aquarii b^1	5	5	23 14 37.96	+4.376	23 14 33.58
Oct. 8		5	5	37.91	.399	33.51
Means		5				23 14 33.547
Aug. 14	68 Pegasi υ	5	5	23 17 27.65	+3.444	23 17 24.21
16		5	5	27.54	.480	24.06
Nov. 5		5	5	27.77	.603	24.17
Means		5				23 17 24.147
Oct. 8	8 Piscium κ^1	5.6	5	23 18 47.83	+4.030	23 18 43.80
Dec. 2		5.6	5	47.37	3.581	43.79
3		5.6	5	47.40	.571	43.83
Means		5.6				23 18 43.807
Aug. 14	70 Pegasi q	5	5	23 21 07.24	+3.517	23 21 03.72
16		5	5	07.53	.539	03.99
Means		5				23 21 03.857
Oct. 8	13 Piscium	6.7	5	23 23 49.02	+4.073	23 23 44.947
Aug. 16	101 Aquarii b^4	5	5	23 24 57.86	+4.032	23 24 53.83
Sept. 11		5	5	57.99	.375	53.62
Dec. 2		5	5	57.56	3.910	53.65
3		5	5	57.51	.898	53.61
Means		5				23 24 53.678
Nov. 5	71 Pegasi y	5	5	23 25 31.46	+3.670	23 25 27.790
Aug. 14	16 Piscium	6	5	23 28 16.61	+3.608	23 28 13.00
16		6	5	17.18	.644	13.54
Dec. 2		6	5	17.21	.628	13.58
3		6	5	16.93	.618	13.31
Means		6				23 28 13.358

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Aug. 14	17 Piscium ι	4.5	5	23 31 46.74	+3.565	23 31 43.18
16		4.5	5	46.93	.595	43.34
Sept. 11		4.5	5	47.13	.927	43.20
12		4.5	5	47.24	.935	43.31
Oct. 8		4.5	5	47.44	4.013	43.43
9		4.5	5	47.35	.011	43.34
Nov. 5		4.5	5	47.14	3.872	43.27
6		4.5	5	47.17	.865	43.30
Dec. 2		4.5	5	46.91	.615	43.30
3		4.5	5	46.95	.605	43.34
Means		4.5				23 31 43.300
Aug. 14	18 Piscium λ	5	5	23 33 56.35	+3.593	23 33 52.76
16		5	5	56.60	.629	52.97
Sept. 11		5	5	56.87	.976	52.89
12		5	5	57.00	.984	53.02
Oct. 8		5	5	56.82	4.058	52.76
9		5	5	56.99	.057	52.93
Nov. 5		5	5	56.90	3.919	52.98
6		5	5	56.81	.910	52.90
Dec. 2		5	5	56.59	.664	52.93
3		5	5	56.51	.654	52.86
Means		5				23 33 52.900
July 19	106 Aquarii A^3	5.6	5	23 35 57.12	+3.229	23 35 53.891
Oct. 9	107 Aquarii A^4	6	5	23 37 46.06	+4.381	23 37 41.70
Dec. 3		6	5	45.74	3.915	41.82
Means		6				23 37 41.752
July 19	20 Piscium *n*	5.6	5	23 39 45.91	+2.996	23 39 42.91
Sept. 11		5.6	5	46.91	4.028	42.88
12		5.6	5	47.11	.038	43.07
Nov. 5		5.6	5	46.59	3.997	42.59
6		5.6	5	46.87	.987	42.88
Means		5.6				23 39 42.866
Aug. 14	21 Piscium	6	5	23 41 19.08	+3.599	23 41 15.481
Oct. 9	79 Pegasi	6	5	23 41 38.24	+3.902	23 41 34.34
Dec. 3		6	5	37.69	.440	34.25
Means		6				23 41 34.294
July 19	22 Piscium	6	5	23 43 49.44	+2.916	23 43 46.52
Sept. 11		6	5	50.45	3.958	46.49
12		6	5	50.53	.968	46.56
Nov. 5		6	5	50.32	.953	46.37
6		6	5	50.35	.944	46.41
Means		6				23 43 46.470

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	s.	h. m. s.
Oct. 9	25 Piscium	6.7	5	23 44 57.21	+4.079	23 44 53.13
Dec. 3		6.7	5	56.82	3.715	53.10
Means		6.7				23 44 53.118
Sept. 11	26 Piscium	6.7	5	23 47 00.63	+3.920	23 46 56.71
12		6.7	5	00.76	.929	56.83
Nov. 6		6	5	00.82	.922	56.90
Means		6.7				23 46 56.813
Oct. 9	84 Pegasi ψ	5.6	5	23 49 40.81	+3.949	23 49 36.86
Dec. 3		5	5	40.45	.550	36.90
Means		5				23 49 36.880
July 19	27 Piscium *p*	5	5	23 50 31.90	+2.947	23 50 28.953
Sept. 11	28 Piscium ω	4.5	5	23 51 09.73	+3.920	23 51 05.81
12		4.5	5	10.04	.929	06.11
Nov. 5		4.5	5	09.71	.951	05.76
6		4.5	5	09.64	.944	05.70
Means		4.5				23 51 05.845
Oct. 9	29 Piscium *q*	5	5	23 53 41.30	+4.152	23 53 37.15
Dec. 3		5	5	41.06	3.812	37.25
Means		5				23 53 37.198
July 19	32 Piscium c^2	6	5	23 54 22.21	+2.816	23 54 19.39
20		6	5	22.15	.845	19.31
Sept. 12		6	5	22.99	3.915	19.08
Means		6				23 54 19.260
Nov. 6	2 Ceti *g*	4	5	23 55 36.39	+4.234	23 55 32.156
Dec. 3	33 Piscium *s*	5	5	23 57 12.28	+3.855	23 57 08.425
Oct. 9	86 Pegasi *k*	6	5	23 57 33.43	+4.024	23 57 29.406

APPARENT RIGHT ASCENSION

OF THE

MOON'S OBSERVED LIMB.

Month and day.	Limb observed.	App. obs'd AR.			Month and day.	Limb observed.	App. obs'd AR.		
		h.	*m.*	*s.*			*h.*	*m.*	*s.*
Jan. 12	I	1	45	47.87	July 10	I	16	23	20.75
13	I	2	43	27.14	11	I	17	18	19.92
15	I	4	53	07.63	12	I	18	14	06.96
16	I	6	02	23.95	13	I	19	09	25.27
18	II	8	17	09.92	14	II	20	05	25.68
23	II	12	31	27.36	15	II	20	57	01.86
25	II	14	03	23.17	16	II	21	46	34.01
					17	II	22	34	35.55
Feb. 11	I	4	29	11.99					
12	I	5	35	56.45	July 19	II	0	10	03.19
15	I	8	47	00.54	20	II	0	59	58.58
19	II	12	10	25.52					
20	II	12	56	24.71	Aug. 5	I	15	10	43.12
22	II	14	30	57.89	6	I	16	03	19.03
					9	I	18	49	06.24
Mar. 11	I	6	22	05.86	11	I	20	36	28.70
13	I	8	26	15.57	14	II	23	06	43.53
17	I	11	48	45.60	18	II	2	32	29.44
17	II	11	50	51.92					
21	II	15	00	16.86	Sept. 7	I	20	14	53.41
					8	I	21	06	31.12
April 8	I	7	07	05.68	10	I	22	45	36.21
10	I	9	05	13.26	11	II	23	36	43.91
12	I	10	46	03.11	12	II	0	26	44.38
13	I	11	32	34.88	13	II	1	18	57.43
15	I	13	03	51.14	14	II	2	14	31.11
16	II	13	52	48.24	15	II	3	14	09.64
17	II	14	41	30.16	16	II	4	17	47.73
19	II	16	25	40.50					
20	II	17	20	35.29	Oct. 3	I	18	58	30.39
					4	I	19	50	57.85
May 10	I	11	18	16.75	5	I	20	42	42.25
11	I	12	03	47.63	6	I	21	33	50.89
12	I	12	49	01.51	7	I	22	22	57.60
13	I	13	35	04.91	8	I	23	11	53.67
16	II	16	07	27.84	9	I	0	01	45.04
17	II	17	02	53.72	11	II	1	51	26.51
18	II	17	57	20.88	12	II	2	51	09.41
					13	II	3	55	15.41
June 7	I	11	48	49.30	14	II	5	02	31.95
8	I	12	34	21.53	15	II	6	10	29.69
11	I	14	56	22.71	31	I	19	30	23.23
12	I	15	47	57.28					
13	I	16	41	46.91	Nov. 1	I	20	22	00.67
16	II	19	29	34.66	2	I	21	11	46.96
17	II	20	22	17.11	3	I	22	00	11.88
19	II	22	01	35.24	4	I	22	48	05.34
20	II	22	49	16.81	5	I	23	36	33.60

RIGHT ASCENSION OF THE MOON—Continued.

Month and day.	Limb observed.	App. obs'd AR.			Month and day.	Limb observed.	App. obs'd AR.		
		h.	m.	s.			h.	m.	s.
Nov. 6	I	0	26	54.90	Dec. 8	I	5	03	20.71
9	II	3	24	37.00	8	II	5	05	58.77
10	II	4	32	45.85	10	II	7	27	38.97
12	II	6	52	22.40	11	II	8	32	06.86
13	II	7	57	26.52	13	II	10	24	25.33
					14	II	11	14	29.07
Dec. 1	I	22	27	37.17	15	II	12	02	28.14
2	I	23	14	18.36	16	II	12	49	46.37
3	I	0	02	09.01	17	II	13	37	35.27
7	I	3	52	49.49					

RIGHT ASCENSION OF THE CENTRE OF THE GEORGIAN.

Month and day.	App. AR.			Remarks.
	h.	m.	s.	
Sept. 11	23	18	24.64	This differs from the Nautical Almanac — 5s.74.

OCCULTATIONS
OF
STARS BY THE MOON.

Month and day.	Name of star.	Mag.	Phase.	Power of telescope.	Mean time, Washington.			Remarks.
					h.	*m.*	*s.*	
Jan. 20	α Leonis	1	Emm.	47	9	09	11.9	
23	χ Virginis	6	Imm.	47	16	~~0~~7	59.4	
23	χ Virginis	6	Emm.	47	17	32	42.5	
April 19	τ Scorpii	3.4	Imm.	47	15	12	39.3	
19	τ Scorpii	3.4	Emm.	47	16	05	19.1	
May 6	μ Cancri	6	Imm.	47	8	56	21.1	
6	Cancri	7	Imm.	47	9	02	14.1	
18	Sagittarii	5	Emm.	47	15	45	34.2	2085 A. S. C.
June 17	*f* Capricorni	6	Emm.	47	14	15	18.3	
July 10	τ Scorpii	3.4	Imm.	47	9	55	09.7	
10	τ Scorpii	3.4	Emm.	47	10	44	25.6	
Sept. 8	ι Capricorni	5	Imm.	47	13	39	27.1	
Oct. 6	d^3 Capricorni	6	Imm.	47	8	22	44.5	
6	Capricorni	7	Imm.	47	10	31	53.9	
13	η Tauri	3	Emm.	47	7	07	51.7	
Nov. 2	ι Capricorni	5	Imm.	47	6	15	59.2	
2	ι Capricorni	5	Emm.	47	7	38	52.3	
3	*e* Aquarii	6	Imm.	47	7	04	41.6	
9	*e* Pleiadum	5	Imm.	47	17	37	32.7	Doubtful.
9	*c* Pleiadum	5	Imm.	47	18	01	00.8	Doubtful.
Dec. 1	N Aquarii	6	Imm.	47	9	53	22.2	
14	*q* Leonis	5.6	Emm.	47	14	19	15.1	
14	76 Leonis	6	Emm.	47	15	42	50.7	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.	Mag.	No. of obs.	Decclination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
1	21 Andromedæ α	1	10	+28° 12′	0 00 07.700	+3.072	+ .440	— .019
2	88 Pegasi γ	2.3	8	+14 18	0 05 00.213	+3.078	+ .103	— .030
3	35 Piscium B	6	2	+ 7 56	0 06 44.494	+3.075	+ .314	
4	8 Ceti ι	4	2	— 9 43	0 11 16.368	+3.058	+ .158	
5	41 Piscium d	5.6	4	+ 7 18	0 12 22.105	+3.078	— .335	
6	9 Ceti	6	2	—13 06	0 14 39.668	+3.049	+ .058	
7	Phœnicis α	2	4	—43 13	0 18 21.643	+2 969	+ .673	
8	12 Ceti n	6	4	— 4 51	0 21 52.308	+3.059	+ .073	
9	38 A. S. C.	6	1	—24 41	0 22 22.103	+3.009	— .357	
10	49 A. S. C.	6.7	3	+12 29	0 26 37.887	+3.104	+ .027	
11	30 Andromedæ ε	4	2	+28 26	0 30 06.848	+3.164	+ .318	
12	31 Andromedæ δ	3	3	+29 59	0 30 47.087	+3.172	+ .417	
13	16 Ceti β	2 3	8	—18 52	0 35 33.263	+3.000	+ .053	— .018
14	63 Piscium δ	5	6	+ 6 43	0 40 28.150	+3.097	+ .090	
15	20 Ceti m	5	4	— 2 01	0 44 49.970	+3.059	— .220	
16	38 Andromedæ η	5	4	+22 33	0 48 40.475	+3.186	+ .665	
17	Ap. Sculp. α	5	3	—30 18	0 50 53 647	+2.898	+ .107	
18	101 A. S. C.	6.7	1	+ 5 37	0 51 32.308	+3.097	+ .498	
19	71 Piscium ε	4	6	+ 7 02	0 54 38.653	+3.106	— .197	
20	31 Ceti η	3.4	1	—11 02	1 00 32.595	+3.000	— .035	
21	83 Piscium τ	6	2	+29 14	1 02 52.023	+3.268	+ .953	
22	85 Piscium φ	6	1	+23 44	1 05 04.209	+3.231	— .051	
23	38 Ceti	6	2	— 1 50	1 06 39.132	+3.056	— .018	
24	Ceti	6.7	1	— 5 —	1 08 28.873	+3.033		
25	40 Ceti	6.7	1	— 3 07	1 08 47.648	+3.046	— .012	
26	90 Piscium υ	6	1	+26 25	1 10 41.338	+3.268	+ .378	
27	91 Piscium l	6	1	+27 54	1 12 17.712	+3.285	+ .262	
28	45 Ceti θ^1	3	5	— 9 01	1 16 01.698	+3.001	+ .158	+ .045
29	47 Ceti	6.7	2	—13 53	1 18 57.797	+2.957	— .833	
30	99 Piscium η	4	4	+14 31	1 22 55.763	+3.189	— .017	
31	49 Ceti	6	3	—16 30	1 26 48.797	+2.922	+ .697	
32	101 Piscium	7	1	+13 50	1 27 13.638	+3.189	+ .678	
33	105 Piscium	6	2	+15 36	1 31 03.574	+3.211	+ .214	
34	109 Piscium	6.7	2	+19 17	1 36 12.185	+3.257	+ .415	
35	52 Ceti τ	3.4	2	—16 47	1 36 38 167	+2.779	+ .297	
36	193 A. S. C.	6	1	+21 29	1 41 18.956	+3.291	+ .496	
37	Ceti	7	2	—11 3-	1 41 31.901	+2.950		
38	53 Ceti χ^2	5	3	—11 29	1 41 43.693	+2.952	+ .673	
39	5 Arietis γ	5	1	+18 31	1 44 45.650	+3.264	+ .030	
40	6 Arietis β	3	4	+20 01	1 45 48.888	+3.283	+ .858	
41	8 Arietis ι	6	1	+17 02	1 48 37.219	+3.253	+ .039	
42	9 Arietis λ	5.6	1	+22 49	1 49 01.380	+3.324	— .380	
43	56 Ceti υ^1	6	1	—23 19	1 49 10.534	+2.804	+ .804	
44	59 Ceti υ^2	4.5	1	—21 51	1 52 27.931	+2.816	+ .511	
45	113 Piscium α	5	3	+ 1 59	1 53 46.393	+3.090	— .057	
46	60 Ceti	6	1	— 0 39	1 54 59.506	+3.060	— .264	
47	13 Arietis α	3	5	+22 42	1 58 09.980	+3.346	+ .420	+ .038
48	15 Arietis	5.6	2	+18 45	2 01 46.165	+3.296	+ .705	
49	6 Trianguli ι	5.6	4	+29 33	2 03 06.338	+3.453	+ .188	
50	65 Ceti ξ^1	5	2	+ 8 06	2 04 31.662	+3.165	+ .502	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
51	22 Arietis	θ^1	6	4	+19°10′	2 09 14.250	+3.315	+ .340	
52	68 Ceti	ο.	6.7	2	— 3 42	2 11 16.065	+3.021	+ .115	
53	69 Ceti		6	3	— 0 20	2 13 44.973	+3.063	+ .713	
54	Fornacis	χ	6.7	1	—24 33	2 15 13.112	+2.729	+ .862	
55	72 Ceti	ρ	5.6	8	—13 01	2 18 18.350	+2.893	+ .080	
56	Trianguli	c	6	1	+28 57	2 18 47.968	+3.487	— .082	
57	27 Arietis	ψ	6	4	+17 00	2 22 02.547	+3.304	+ .337	
58	77 Ceti	e^1	6	2	— 8 34	2 26 49.088	+2.948	+ .088	
59	78 Ceti	ν	5	2	+ 4 54	2 27 29.073	+3.136	+ .453	
60	32 Arietis	ν	5.6	4	+21 16	2 29 44.643	+3.382	+ .393	
61	83 Ceti	ε	4.5	1	—12 33	2 31 49.583	+2.885	+ .093	
62	34 Arietis	μ	6	1	+19 20	2 33 21.760	+3.357	+1.290	
63	86 Ceti	γ	3	6	+ 2 33	2 35 00.988	+3.108	+ .168	— .016
64	39 Arietis	b	4	2	+28 35	2 38 23.970	+3.530	+ .470	
65	40 Arietis		6	1	+17 37	2 39 34.670	+3.339	+ .650	
66	41 Arietis	c	3	3	+26 36	2 40 35.057	+3.497	+ .447	
67	Fornacis	υ	7.8	1	—38 04	2 42 14.795	+2.388	— .045	
68	2 Eridani	τ^2	4.5	2	—21 40	2 43 47.182	+2.720	+ .352	
69	312 A. S. C.		7	1	+15 50	2 44 17.813	+3.316	+ .513	
70	45 Arietis	ρ^2	6	4	+17 41	2 46 49.755	+3.350	+ .605	
71	46 Arietis	ρ^3	6	1	+17 23	2 47 25.022	+3.346	+ .392	
72	48 Arietis	ε	5	8	+20 42	2 50 04.568	+3.408	+ .328	
73	92 Ceti	α	2.3	8	+ 3 27	2 53 55.341	+3.126	+ .211	— .004
74	53 Arietis		6.7	6	+17 15	2 58 25.850	+3.358	+ .380	
75	57 Arietis	δ	4	8	+19 07	3 02 29.466	+3.398	+ .256	
76	12 Eridani		4	1	—29 37	3 05 16.721	+2.561	— .349	
77	58 Arietis	ζ	4.5	4	+20 27	3 05 42.953	+3.427	+ .523	
78	13 Eridani	ζ	4	1	— 9 25	3 08 04.100	+2.906	+ .370	
79	95 Ceti	k^2	5.6	6	— 1 31	3 10 11.412	+3.041	— .088	
80	15 Eridani		5.6	1	—23 06	3 11 18.113	+2.646	+ .323	
81	64 Arietis	g	5.6	7	+24 09	3 14 52.430	+3.517	+ .250	
82	1 Tauri		4.5	1	+ 8 28	3 16 12.712	+3.217	+ .312	
83	2 Tauri	ξ	4	4	+ 9 10	3 18 30.273	+3.231	+ .278	
84	4 Tauri	s	5	1	+10 47	3 21 40.343	+3.263	+ .338	
85	17 Eridani		4.5	4	— 5 38	3 22 40.938	+2.966	— .272	
86	7 Tauri		6	1	+23 55	3 24 58.792	+3.529	+ .862	
87	19 Eridani	ϵ^2	4	4	—22 10	3 26 43.245	+2.641	+ .145	
88	10 Tauri	E	5	1	— 0 06	3 28 42.675	+3.065	— .265	
89	20 Eridani	F	6	1	—18 00	3 29 00.295	+2.725	+ .415	
90	21 Eridani		6	4	— 6 09	3 31 07.382	+2.953	+ .362	
91	12 Tauri		6	1	+ 2 32	3 31 31.422	+3.114	+ .012	
92	16 (Pleiadum)	g	5.6	4	+23 47	3 35 18.448	+3.542	+ .628	
93	17 (Pleiadum)	b	4.5	7	+23 36	3 35 23.220	+3.538	+ .330	
94	25 Tauri	η	3	7	+23 36	3 37 59.171	+3.546	+ .561	+ .039
95	27 (Pleiadum)	f	5	2	+23 33	3 39 39.460	+3.543	+ .400	
96	28 (Pleiadum)	h	5.6	1	+23 38	3 39 40.415	+3.545	+ .405	
97	426 A. S. C.		5	4	—38 07	3 42 41.983	+2.202	+ .608	
98	Eridani	g	5	1	—36 41	3 43 27.899	+2.244	— .551	
99	31 Tauri	u^2	6	1	+ 6 03	3 43 28.664	+3.184	+ .674	
100	32 Eridani		5	2	— 3 26	3 46 15.586	+3.001	— .074	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.			Mag	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from— A. S. C.	N. A.
							h. m. s.	s.	s.	s.
101	32	Tauri		6	1	+22°01′	3 47 25.556	+3.519	+ .636	
102		Eridani	*i*	5.6	3	−35 13	3 47 33.420	+2.278	+ .170	
103	34	Eridani	γ^1	2.3	3	−13 58	3 50 34.027	+2.789	+ .197	+ .015
104	441	A. S. C.		6.7	1	+17 44	3 51 36.130	+3.429	+ .440	
105	35	Tauri	λ	4	1	+12 02	3 51 49.582	+3.309	+ .752	
106	38	Tauri	ν	5	1	+ 5 32	3 54 39.007	+3.178	− .013	
107	37	Tauri	A^1	5	3	+21 38	3 55 14.816	+3.520	+ .636	
108	39	Tauri	A^2	7	1	+21 34	3 55 52.495	+3.519	+ .355	
109	41	Tauri		6	1	+27 10	3 56 48.453	+3.655	+ .253	
110	454	A. S. C.		6.7	1	+16 54	3 58 50.451	+3.418	+ .651	
111		Eridani	A	6	1	−28 06	3 59 02.091	+2.452	+ .881	
112	43	Tauri	ω^1	6	3	+19 11	3 59 51.200	+3.469	+ .160	
113	44	Tauri	P	6	1	+26 03	4 01 06.248	+3.634	+ .688	
114	37	Eridani		5.6	1	− 7 21	4 02 34.423	+2.918	+ .193	
115	463	A. S. C.		7	1	+22 00	4 03 22.529	+3.538	+ .119	
116	38	Eridani	ο	5	3	− 7 16	4 04 03.460	+2.919	+ .510	
117	47	Tauri		5.6	1	+ 8 51	4 05 14.526	+3.250	+ .106	
118	49	Tauri	μ	5	2	+ 8 29	4 06 51.023	+3.243	+ .203	
119	50	Tauri	ω^2	5.6	1	+20 11	4 07 53.801	+3.500	+ .671	
120	40	Eridani	*d*	5	1	− 7 54	4 07 54.705	+2.757	+ .465	
121		Horologii	α	5	1	−42 41	4 08 42.567	+1.978	+ .767	
122	54	Tauri	γ	3.4	4	+15 14	4 10 41.763	+3.390	+ .413	
123	41	Eridani	X	3.4	1	−34 12	4 11 50.499	+2.259	+ .799	
124	59	Tauri	χ	6	2	+25 15	4 12 51.211	+3.629	+ .371	
125	62	Tauri		7	1	+23 55	4 14 21.526	+3.598	+ .036	
126	69	Tauri	υ^1	5	6	+22 27	4 16 44.585	+3.564	+ .805	
127	74	Tauri	ι	4	1	+18 49	4 19 16.991	+3.479	+ .531	
128	44	Eridani	k^1	6	3	+ 1 01	4 20 16 060	+3.089	+ .260	
129	80	Tauri		6	1	+15 17	4 21 01.411	+3.399	+ .211	
130	85	Tauri		6.7	1	+15 30	4 22 43.770	+3.405	+ .500	
131	45	Eridani	k^2	5.6	3	− 0 23	4 23 41.727	+3.059	+ .237	
132	87	Tauri	α	1	9	+16 11	4 26 44.763	+3.427	+ .443	− .008
133	53	Eridani		5	1	−14 37	4 30 50.683	+2.745	− .437	
134	94	Tauri	τ	5	5	+22 39	4 32 39.048	+3.581	+ .398	
135	547	A. S. C.		6	1	+10 51	4 35 34.146	+3.306	+ .646	
136		Cœli Sculp.	β	5	2	−37 28	4 36 24.508	+2.111	+ .528	
137	57	Eridani	μ	5	1	− 3 33	4 37 30.284	+2.990	+ .314	
138	58	Eridani		6	1	−17 14	4 40 25.430	+2.678	+ .440	
139	96	Tauri	K	6	2	+15 37	4 40 35.270	+3.419	+ .660	
140	3	Orionis	*r*	4.5	1	+ 5 20	4 42 41.254	+3.185	− .346	
141	4	Orionis	σ^1	5	1	+13 59	4 43 29.284	+3.382	+ .604	
142	61	Eridani	ω	5	3	− 5 43	4 45 02.240	+2.941	+ .210	
143	5	Orionis		6	1	+ 2 14	4 45 02.257	+3.117	+ .307	
144	9	Orionis	o^2	5	1	+13 15	4 47 22.834	+3.367	+ .434	
145	572	A. S. C.		6.7	1	+23 42	4 48 06.646	+3.625	+ .306	
146	62	Eridani	*b*	6	1	− 5 26	4 48 31.489	+2.947	+ .179	
147	10	Orionis	*s*	5.6	1	+ 1 28	4 50 15.721	+3.100	+ .291	
148	63	Eridani		5	1	−10 30	4 52 16.173	+2.831	− .227	
149	102	Tauri	ι	4.5	3	+21 21	4 53 32.293	+3.568	+ .453	
150	104	Tauri	*m*	5	2	+18 25	4 57 59.890	+3.512	− .220	

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									A.S C.	N. A.
							h. m. s.	s.	s.	s.
151	2	Leporis	ε	3.4	1	—22°35′	4 58 41.070	+2.532	+ .410	
152	69	Eridani	λ	4.5	5	— 8 58	5 01 29.506	+2.864	+ .186	
153	617	A. S. C.		5	1	— 8 20	5 05 51.668	+2.878	+ .078	
154	19	Orionis	β	1	10	— 8 23	5 06 51.047	+2.878	+ .157	— .045
155		Columbæ		7	1	—35 —	5 10 02.499	+2.151		
156	21	Orionis		6	2	+ 2 25	5 10 50.558	+3.123	— .032	
157		Columbæ	ο	5	5	—35 03	5 11 43.060	+2.151	+ .530	
158	22	Orionis	ο	5.6	2	— 0 33	5 13 35.740	+3.055	+ .560	
159	112	Tauri	β	2	16	+28 28	5 16 10.979	+3.782	+ .219	+ .022
160	9	Leporis	β	4	10	—20 53	5 21 23.416	+3.565	— .064	
161	34	Orionis	δ	2	13	— 0 25	5 23 50.039	+3.061	+ .029	— .065
162	11	Leporis	α	3.4	2	—17 57	5 25 40.650	+2.642	+ .320	+ .088
163	46	Orionis	ε	2.3	10	— 1 19	5 28 05.785	+3.040	+ .135	— .075
164	26	Aurigæ	l	5.6	5	+30 24	5 28 22.036	+3.844	+ .436	
165		Columbæ	α	2	13	—34 10	5 33 51.552	+2.169	+ .402	+ .034
166	13	Leporis	γ	4	2	—22 30	5 37 47.690	+2.517	+ .230	
167	130	Tauri	N	7	1	+17 40	5 38 06.478	+3.491	+ .058	
168	131	Tauri	O	6	1	+14 25	5 38 06.557	+3.410	— .023	
169		Columbæ	μ	5	5	—32 22	5 40 03.312	+2 224	+ .282	
170	136	Tauri	C	5	11	+27 34	5 43 16.562	+3.763	+ .452	
171	58	Orionis	α	1	11	+ 7 22	5 46 30 751	+3.243	+ .161	+ .041
172	59	Orionis		6	1	+ 1 49	5 50 06.022	+3.110	+ .602	
173	60	Orionis	B	6	2	+ 0 32	5 50 36.146	+3.080	+ 496	
174		Columbæ	γ	5	2	—35 18	5 51 52.062	+2.122	+ .282	
175	3	Monocerotis		5.6	2	—10 36	5 54 18.907	+2.818	+ .447	
176	62	Orionis	χ^3	5	1	+20 08	5 54 25.079	+3.558	— .051	
177	66	Orionis	C	6	2	+ 4 10	5 56 31.283	+3.165	+ .383	
178	67	Orionis	ν	4.5	2	+14 47	5 58 26.260	+3.421	+ .440	
179	18	Leporis	θ	5	1	—14 56	5 58 54.983	+2.712	+ .003	
180	759	A. S. C.		6.7	1	+22 13	5 59 53 566	+3.614	— .078	
181	19	Leporis	τ	6	1	—19 09	6 00 44.061	+2.604	+ .461	
182		Columbæ	θ	5	2	—37 14	6 02 02.781	+2.053	+ .681	
183	44	Aurigæ	κ	4	4	+29 33	6 05 11.069	+3.825	+ .809	
184	72	Orionis	f^2	6	1	+16 11	6 06 11.933	+3.456	+ .723	
185	75	Orionis	l	6	2	+10 00	6 08 17.343	+3.303	— .233	
186		Geminorum		7	1	+23 39	6 09 09.510	+3.655		
187	13	Geminorum	μ	3	5	+22 35	6 13 16.918	+3.626	+ .498	+ .101
188	3	Canis Maj.	λ	4	1	—17 53	6 16 16.078	+2.191	+ .258	
189	48	Aurigæ	z	6	3	+30 35	6 18 17.020	+3.856	+ .210	
190		Canis Maj.	D^1	5	3	+ 0 23	6 22 14.517	+3.077	+ .077	
191	49	Aurigæ	c	6	1	+28 08	6 25 07.595	+3.779	— .085	
192	14	Monocerotis	g	6.7	1	+ 7 41	6 26 06 580	+3.248	+ .370	
193	24	Geminorum	γ	3	1	+16 32	6 28 28 035	+3.462	+ .405	
194	7	Canis Maj.	ν^2	5	2	—19 07	6 29 42.175	+2.609	— .015	
195	8	Canis Maj.	ν^3	5.6	2	—18 06	6 30 51.305	+2.635	+ .305	
196	27	Geminorum	ε	3	4	+25 17	6 34 05.383	+3.693	+ .563	
197	9	Canis Maj.	α	1	4	—16 30	6 38 05.838	+2.646	+ .138	— .080
198	36	Geminorum	d	6.7	1	+21 57	6 41 57.626	+3.598	+ .226	
199	13	Canis Maj.	κ^2	4	1	—32 20	6 43 52.018	+2.238	+ .208	
200	37	Geminorum		6	1	+25 34	6 45 28.067	+3.695	+ .497	

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							A. S C.	N. A.
					h. m. s.	s.	s.	s.
201	38 Geminorum c^1	5.6	1	+13°23′	6 45 37.034	+3.380	+ .344	
202	17 Canis Maj. π^2	6	1	—20 12	6 48 08.101	+2.587	— .069	
203	18 Canis Maj. μ	5.6	1	—13 50	6 48 46.768	+2.746	+ .518	
204	21 Canis Maj. ε	2.3	5	—28 46	6 52 20.446	+2.356	+ .326	+ .060
205	43 Geminorum ζ	4	1	+20 48	6 54 37.026	+3.562	+ .196	
206	23 Canis Maj. γ	4	4	—15 24	6 56 31.088	+2.711	+ .188	
207	45 Geminorum ο	6	1	+16 11	6 59 11.505	+3.444	+ .395	
208	46 Geminorum τ	5	4	+30 30	7 00 57.088	+3.829	+ .438	
209	25 Canis Maj. δ	3.4	1	—26 09	7 01 53.055	+2.436	+ .045	
210	22 Monocerotis m	4.5	3	— 0 14	7 03 41.500	+3.063	— .120	
211	26 Canis Maj.	6	1	—25 41	7 05 39.598	+2.452	+ .038	
212	27 Canis Maj. e^1	4.5	2	—26 05	7 07 44.061	+2.443	+ .191	
213	55 Geminorum δ	3.4	6	+22 16	7 10 33.783	+3.592	+ .223	— .043
214	57 Geminorum A	6	1	+25 21	7 13 43.311	+3.670	+ .371	
215	59 Geminorum	6.7	2	+27 56	7 14 35 815	+3.741	+ .405	
216	60 Geminorum ι	4	3	+28 06	7 15 47.047	+3.744	+ .157	
217	3 Canis Min. β	3	3	+ 8 36	7 18 28.270	+3.259	+ .470	
218	6 Canis Min. ο	5.6	2	+12 20	7 20 53.300	+3.343	+ .760	
219	924 A. S. C.	6	1	—28 50	7 21 38.272	+2.379	+ .122	
220	7 Canis Min. δ^1	6	1	+ 2 15	7 23 47.163	+3.118	+ .243	
221	68 Geminorum k	6	1	+16 10	7 24 28.446	+3.430	+ .206	
222	69 Geminorum υ	5	5	+27 15	7 26 03.464	+3.709	+ .054	
223	10 Canis Min. α	1.2	10	+ 5 38	7 30 55.375	+3.145	+ .095	+ .026
224	78 Geminorum β	2	10	+28 24	7 35 31.067	+3.683	+ .458	— .006
225	Arg in pup. c	4	6	—37 35	7 39 33.555	+2.135	+ .056	
226	7 Argus ξ	4	2	—24 28	7 42 34.102	+2.520	+ .212	
227	83 Geminorum φ	5	4	+27 10	7 43 41.873	+3.686	+ .503	
228	Arg. in pup. b	5	1	—38 27	7 46 59 450	+2.121	+ .830	
229	1 Cancri	6	4	+16 13	7 47 54.165	+3.415	+ .485	
230	2 Cancri ω^1	6	5	+25 49	7 51 14.532	+3.641	+ .592	
231	3 Cancri	6	1	+17 45	7 51 36.740	+3.447	+ .220	
232	6 Cancri	5.6	4	+28 14	7 53 40.920	+3.701	+ .420	
233	8 Cancri	6	1	+13 34	7 56 09.613	+3.351	+ .363	
234	9 Cancri μ^1	6	1	+23 05	7 56 49.249	+3.567	+ .389	
235	15 Argus	3.4	7	—23 51	8 00 44.017	+2.559	+ .617	— .058
236	19 Argus	6	2	—12 27	8 03 44.973	+2.815	— .367	
237	20 Argus	5	3	—15 18	8 05 58.877	+2.756	+ .397	
238	17 Cancri β	4	2	+ 9 40	8 07 49.890	+3.262	+ .230	
239	18 Cancri χ	6	1	+27 44	8 10 20.153	+3.662	+ .483	
240	19 Cancri λ	6	2	+24 31	8 11 00.980	+3.582	+ .590	
241	Arg. in pup. q	4.5	2	—36 10	8 12 34.622	+2.250	+ .102	
242	20 Cancri d^1	6	2	+18 50	8 14 11.728	+3.449	— .302	
243	22 Argus	6	1	—12 33	8 15 15.640	+2 821	— .110	
244	25 Cancri d^2	6	1	+17 34	8 16 46.076	+3.419	+ .386	
245	1029 A. S. C.	6	2	—23 32	8 18 09.510	+2.589	+ .780	
246	2 Hydræ	6	1	— 3 28	8 18 27.772	+3.002	+ .502	
247	31 Cancri θ	5.6	5	+18 33	8 22 28.006	+3.436	+ .676	
248	1044 A. S. C.	6	4	+ 7 11	8 27 20.420	+3.204	+ .160	
249	1049 A. S. C.	6.7	2	+20 06	8 30 39.349	+3.457	+ .279	
250	39 Cancri	6	1	+20 34	8 30 53.723	+3.466	+ .363	

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
251	41 Cancri ε	6	1	+20°06′	8 31 15.763	+3.456	+ .873	
252	43 Cancri γ	5	2	+22 02	8 34 01.097	+3.493	+ .327	
253	47 Cancri δ	4.5	3	+18 44	8 35 35.100	+3.422	+ .460	
254	11 Hydræ ε	4	5	+ 7 00	8 38 17.990	+3.197	+ .180	— .084
255	14 Hydræ B	5.6	1	— 2 51	8 41 19.318	+3.018	+ .748	
256	54 Cancri	6.7	1	+15 57	8 42 06.476	+3.359	+ .626	
257	Pixid Naut. γ	5.6	1	—27 07	8 43 45.096	+2.551	+ .226	
258	58 Cancri ρ^4	6	1	+28 32	8 46 03.998	+3.614	+ .588	
259	62 Cancri o^1	6	1	+15 56	8 48 19.036	+3.352	+ .476	
260	65 Cancri α^2	5	2	+12 28	8 49 43.870	+3.287	+ .330	
261	69 Cancri ν	6	2	+25 05	8 53 22.332	+3.525	+ .332	
262	18 Hydræ ω	6	1	+ 5 44	8 57 32.879	+3.165	+ .249	
263	77 Cancri ξ	5.6	1	+22 41	9 00 09.027	+3.465	+ .167	
264	1112 A. S. C.	5.6	1	—25 13	9 01 02.045	+2.625	+ .905	
265	22 Hydræ θ	4.5	1	+ 2 59	9 06 02.252	+3.117	+ .282	
266	83 Cancri q	6	2	+18 23	9 10 02.583	+3.369	+ .153	
267	1 Leonis κ	5	2	+26 52	9 15 19.348	+3.516	— .032	
268	30 Hydræ α	2	2	— 7 58	9 19 43.620	+2.950	+ .450	— .050
269	4 Leonis λ	4.5	1	+23 40	9 22 34.835	+3.441	+ .015	
270	33 Hydræ	6	1	— 5 12	9 26 33.784	+2.993	+ .704	
271	14 Leonis ο	4	2	+10 37	9 32 36.367	+3.219	+ .437	
272	17 Leonis ε	3	2	+24 30	9 36 45.561	+3.427	+ .421	+ .032
273	20 Leonis	7	1	+21 55	9 40 52.350	+3.377	+ .330	
274	8 Sextantis d	6	1	— 7 21	9 44 35.345	+2.972	+ .135	
275	27 Leonis ν	6	1	+13 12	9 49 36.759	+3,238	+ .419	
276	1199 A. S. C.	7	1	—12 31	9 54 47.927	+2.914	— .023	
277	32 Leonis α	1	1	+12 45	9 59 50.809	+3.222	+ .309	+ .006
278	1215 A. S. C.	6	1	— 6 31	10 03 18.441	+2.994		
279	36 Leonis ζ	4.5	2	+24 13	10 07 46.867	+3.353	+ .377	
280	41 Leonis γ	2	2	+20 39	10 11 08.645	+3.300	+ .635	
281	Arg. in vel. r	4.5	2	—40 51	10 15 28.754	+2.558	+ .124	
282	Antl. Pneum. α	4.5	1	—30 15	10 19 50.417	+2.737	— .093	
283	47 Leonis ρ	4	2	+10 08	10 24 23.005	+3.166	+ .205	
284	1 Hyd. & Crat.	6	2	—15 31	10 28 28.234	+2.924	+ .144	
285	2 Hyd.&Crat. ϕ^3	5	1	—16 03	10 30 47.510	+2.922	— .140	
286	33 Sextantis m	6	2	— 0 54	10 33 15.934	+3.061	+ .494	
287	40 Leonis Min.	5.6	1	+27 09	10 34 13.860	+3.321	+ .280	
288	37 Sextantis o^1	6	1	+ 7 13	10 37 45.663	+3.123	+ .603	
289	53 Leonis l	6	1	+11 24	10 40 50.730	+3.160	+ .380	
290	4 Hyd.& Crat. ν	4	2	—15 21	10 41 44.269	+2.915	+ .699	
291	6 Hyd.&Crat. b^3	5.6	3	—19 16	10 45 40.384	+2.919	+ .404	
292	1299 A. S. C.	5	3	—36 17	10 49 16.967	+2.769	+ .407	
293	58 Leonis d	5	2	+ 4 29	10 52 17.774	+3.099	+ .304	
294	61 Leonis s	5.6	1	— 1 37	10 53 40.075	+3.058	+ .655	
295	63 Leonis χ	4.5	4	+ 8 12	10 56 45.640	+3.086	+ .530	
296	10 Hyd.&Crat.	5.6	2	—27 13	11 01 00.314	+2.892	+ .114	
297	68 Leonis δ	3	7	+21 24	11 05 35.430	+3.193	+ .390	+ .007
298	75 Leonis q	5.6	3	+ 2 53	11 09 03.413	+3.083	+ .513	
299	12 Hyd.& Crat. δ	3.4	6	—13 55	11 11 20.893	+3.001	+ .183	— .010
300	77 Leonis σ	4	1	+ 6 54	11 12 53.124	+3.102	+ .644	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
301	78 Leonis ι	4	2	+11°25′	11 15 34.872	+3.121	+ .522	
302	79 Leonis *r*	6	2	+ 2 17	11 15 49.771	+3.079	+ .491	
303	15 Hyd.& Crat. γ	4	1	—16 48	11 16 53.776	+2.992	+ .576	
304	84 Leonis τ	4	7	+ 3 44	11 19 42.556	+3.084	+ .406	
305	17 Hyd.& Crat.	6	3	—28 23	11 24 21.177	+2.955	—1.023	
306	19 Hyd.& Crat. ξ	4	2	—30 58	11 25 09.006	+2.945	+ .786	
307	1359 A. S. C.	6	1	+28 40	11 27 52.000	+3.172	+ .140	
308	91 Leonis υ	4.5	6	+ 0 04	11 28 45.565	+3.068	+ .375	
309	92 Leonis	5.6	6	+22 14	11 32 27.520	+3.135	+ .270	
310	27 Hyd.& Crat.	4	7	—17 28	11 36 39.746	+3.025	+ .566	
311	94 Leonis β	2.3	4	+15 28	11 40 53.670	+3.066	+ .260	— .032
312	5 Virginis β	3.4	6	+ 2 40	11 42 21.721	+3.124	+ .301	
313	28 Hyd.& Crat. β	4	1	—33 01	11 44 50.834	+3.009	+ .254	
314	6 Virginis A	6	4	+ 9 20	11 46 50.555	+3.081	+ .305	
315	7 Virginis *b*	5.6	4	+ 4 33	11 51 45.287	+3.072	+ .227	
316	9 Virginis *o*	4.5	5	+ 9 37	11 57 03.446	+3.071	+ .026	
317	1 Corvi α	4.5	1	—23 50	12 00 10.430	+3.067	+ .240	
318	10 Virginis *r*	6	2	+ 2 48	12 01 29.515	+3.068	+ .445	
319	2 Corvi ε	4	2	—21 44	12 01 54.378	+3.071	+ .168	
320	5 Comæ Ber.	6	1	+21 26	12 04 01.104	+3.060	+ .874	
321	12 Virginis *t*	6	2	+11 09	12 05 16.987	+3.063	+ .417	
322	4 Corvi γ	3	10	—16 39	12 07 35.117	+3.080	+ .107	
323	13 Virginis *n*	6	1	+ 0 06	12 10 28.164	+3 068	+ .124	
324	15 Virginis η	3.4	12	+ 0 13	12 11 43.291	+3.068	— .019	
325	12 Comæ Ber. *e*	5	1	+26 44	12 14 27.039	+3.027	— .121	
326	13 Comæ Ber. *f*	5.6	8	+26 59	12 16 16.418	+3.021	+ .628	
327	16 Comæ Ber. *a*	5	8	+27 43	12 18 58.688	+3.011	+ .468	
328	17 Comæ Ber. *d*	5.6	2	+26 48	12 20 54.515	+3.008	+ .155	
329	7 Corvi δ	3	8	—15 37	12 21 35.664	+3.102	— .406	
330	21 Virginis *q*	5.6	4	— 8 34	12 25 31.630	+3.090	+ .120	
331	9 Corvi β	2.3	8	—22 31	12 25 59 739	+3.133	+ .659	+ .036
332	Hyd.& Crat. *d*	5.6	7	—26 15	12 29 14.104	+3.150	+ .344	
333	26 Virginis χ	5 6	2	— 7 07	12 30 59.446	+3.090	+ .216	
334	29 Virginis γ^1	4	9	— 0 34	12 33 33.443	+3.022	+ .433	
335	Hyd.& Crat. *e*	6	1	—27 27	12 35 29.811	+3.173	+ .171	
336	33 Virginis	6	3	+10 26	12 38 14.723	+3.027	+ .078	
337	27 Comæ Ber. *n*	6	4	+17 27	12 38 38.878	+2.998	+ .008	
338	30 Comæ Ber.	6	4	+28 26	12 41 29.240	+2.939	+ .160	
339	Centauri *p*	6	1	—43 08	12 42 01.475	+3.245		
340	37 Virginis	6.7	1	+ 3 56	12 43 28.179	+3.051	+ .029	
341	31 Comæ Ber. *p*	5.6	2	+28 25	12 43 53.790	+2.932	+ .070	
342	35 Comæ Ber. *q*	5	2	+22 07	12 45 24.619	+2.962	— .251	
343	41 Virginis	6	1	+13 17	12 45 47.918	+3.006	+ .358	
344	40 Virginis ψ	5.6	2	— 8 40	12 46 02.301	+3.108	— .109	
345	43 Virginis δ	3.4	3	+ 4 16	12 47 32.740	+3.004	+ .330	
346	36 Comæ Ber. *r*	4.5	2	+18 17	12 51 00.518	+2.971	+ .438	
347	37 Comæ Ber.	7	1	+31 39	12 52 36.770	+2.882	— .430	
348	47 Virginis ε	3.4	5	+11 49	12 54 12.720	+3.003	— .080	
349	39 Comæ Ber. *t*	6	3	+22 01	12 58 33.103	+2.932	+ .093	
350	41 Comæ Ber. *u*	4.5	2	+28 29	12 59 29.589	+2.883	+ .859	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
351	49 Virginis *g*	5.6	3	— 9°53′	12 59 31.317	+3.127	— .093	
352	51 Virginis *θ*	4.5	4	— 4 41	13 01 40.300	+3.097	— .020	
353	53 Virginis	5	1	—15 20	13 03 33.473	+3.167	+ .733	
354	55 Virginis	6	5	—19 05	13 05 37.868	+3.197	— .112	
355	59 Virginis *e*	5.6	2	+10 16	13 08 49.971	+2.997	— .119	
356	58 Virginis	7	2	— 9 42	13 09 04.656	+3.135	+ .146	
357	61 Virginis	4.5	5	—17 25	13 10 02.769	+3.106	+ .549	
358	Centauri *ι*	3	9	—35 52	13 11 37.649	+3.362	— .871	
359	64 Virginis *u*	6	1	+ 6 00	13 14 05.783	+3.023	+ .153	
360	67 Virginis *α*	1	11	—10 19	13 16 46.329	+3.150	+ .149	— .030
361	68 Virginis *i*	5	3	—11 52	13 18 16.590	+3.161	+ .530	
362	Centauri *d*	4	2	—38 35	13 21 47.654	+3.437	+ .114	
363	78 Virginis	6	1	+ 4 29	13 26 01.917	+3.029	+1.287	
364	79 Virginis *ζ*	4	2	+ 0 14	13 26 32.775	+3.066	— .146	
365	Hydræ con. *f*	6	1	—25 41	13 27 57.011	+3.307	— .229	
366	Centauri *t*	6	1	—28 44	13 29 44.151	+3.345	+ .111	
367	1 Bootis	6	1	+20 46	13 33 01.859	+2.868	+ .569	
368	82 Virginis *m*	5.6	1	— 7 54	13 33 13.361	+3.140	+ .151	
369	2 Bootis	6	1	+23 19	13 33 28.136	+2.840	+ .546	
370	83 Virginis	6	2	—15 22	13 35 52.518	+3.216	+ .998	
371	85 Virginis	6.7	1	—14 58	13 36 58.754	+3.213	+ .434	
372	86 Virginis O	6	1	—11 37	13 37 25.308	+3.180	+ .298	
373	Centauri *μ*	4	1	—41 40	13 40 01.196	+3.567	+ .546	
374	89 Virginis *x*	5.6	1	—17 20	13 41 11.396	+3.245	+ .246	
375	3 Centauri *k*	5	2	—32 12	13 42 36.922	+3.430	— .718	
376	4 Centauri *h*	5	1	—31 08	13 44 01.439	+3.419	+ .209	
377	8 Bootis *η*	3	7	+19 12	13 47 04.030	+2.860	+ .260	+ .023
378	9 Bootis *l*	5	2	+28 17	13 49 15.790	+2.739	+ .260	
379	3 Hyd con. S^1	6	1	—24 11	13 49 33.698	+3.342	+1.198	
380	4 Hyd. con. S^2	6	2	—24 13	13 51 03.472	+3.346	— .178	
381	93 Virginis *τ*	5	3	+ 2 19	13 53 30.674	+3.042	+ .264	
382	11 Bootis	6	3	+28 10	13 53 54.937	+2.728	+ .787	
383	5 Hyd. con. *π*	4.5	2	—25 54	13 57 16.814	+3.384	+ .334	
384	5 Centauri *θ*	2	6	—35 34	13 57 17.603	+3.491	— .398	
385	96 Virginis *y*	6.7	1	— 9 34	14 00 29.622	+3.180	+ .332	
386	1610 A. S. C.	6	4	—15 32	14 02 06.922	+3.255	+ .662	
387	12 Bootis *d*	5.6	1	+25 51	14 03 05.841	+2.737	— .019	
388	98 Virginis *κ*	4	9	— 9 31	14 04 22.236	+3.183	+ .046	
389	15 Bootis *υ*	6	1	+10 51	14 07 01.343	+2.933	+ .563	
390	16 Bootis *α*	1	12	+20 01	14 08 21.933	+2.731	+ .333	+ .022
391	100 Virginis *λ*	5	5	—12 37	14 10 27.760	+2.733	+ .220	
392	18 Bootis *t*	6	2	+13 45	14 11 31.917	+2.891	+ .777	
393	20 Bootis *y*	6	3	+17 03	14 12 10.950	+2.845	+ .410	
394	7 Hyd. con.	6	1	—27 01	14 13 53.619	+3.442	+ .159	
395	2 Libræ	6	1	—10 58	14 14 49.567	+3.211	+ .817	
396	1633 A. S. C.	6	2	—24 04	14 15 41.927	+3.399	+ .207	
397	1636 A. S. C.	5.6	3	+ 6 33	14 16 13.897	+2.982	— .133	
398	8 Hyd. con.	5.6	1	—28 46	14 18 49.385	+3.483	+ .045	
399	105 Virginis *φ*	5	4	— 1 30	14 19 57.888	+3.088	+ .128	
400	106 Virginis N^2	6	2	— 6 10	14 20 15.954	+3.150	+ .494	

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									A S.C.	N.A.
							h. m. s.	s.	s.	s.
401	25	Bootis	ρ	4	6	+31°05′	14 24 55.913	+2.592	— .117	
402		Centauri	η	3	2	—41 22	14 25 22.625	+3.764	— .015	
403	28	Bootis	σ	5	4	+30 27	14 27 42.775	+2.597	+ .635	
404	1651	A. S. C.		6.7	3	—11 37	14 28 29.653	+3.233	—2.267	
405		Lupi	α	3	3	—46 42	14 31 19.670	+3.933	— .440	
406	29	Bootis	π	4.5	2	+17 06	14 33 12.584	+2.813	+ .844	
407	107	Virginis	μ	4.5	2	— 4 57	14 34 38.117	+3.140	+ .107	
408	34	Bootis		4.5	2	+27 13	14 36 23.542	+2.635	+ .692	
409	36	Bootis	ε	3	13	+27 45	14 37 59.962	+2.623	+ .472	— .037
410	9	Libræ	α^2	3	10	—15 22	14 42 02.314	+3.309	— .036	+ .010
411	13	Libræ	ξ^1	6	6	—11 14	14 45 42.217	+3.243	+ .317	
412	1690	A. S. C.		6.7	5	—20 41	14 48 08.252	+3.404	+3.062	
413		Centauri	χ	3	1	—41 27	14 48 46.955	+3.857	— .025	
413	1698	A. S. C.		6	3	+17 02	14 49 44.260	+2.792	+ .420	
415	18	Libræ		6.7	1	—10 30	14 50 14.655	+3.234	— .200	
416	19	Libræ	δ	5	3	— 7 53	14 52 25.980	+3.193	+ .230	
417	20	Libræ		3.4	8	—24 39	14 54 43.291	+3.490	+ .241	
418	43	Bootis	ψ	5	1	+27 34	14 57 35.483	+2.580	+ .593	
419	21	Libræ	ν^1	6.7	1	—15 38	14 57 43.354	+3.328	+ .944	
420	22	Libræ	ν^2	6.7	1	—15 51	14 57 53.765	+3.333	+ .595	
421	45	Bootis	c	5	2	+25 30	15 00 16.504	+2.617	+ .854	
422	24	Libræ	ι^1	5.6	4	—19 11	15 03 07.005	+3.400	+ .065	
423	27	Libræ	β	2.3	6	— 8 47	15 03 24.318	+3.222	+ .148	+ .036
424	28	Libræ	υ	6.7	3	—17 34	15 11 50.060	+3.381	+ .020	
425		Lupi	ϕ^2	5	2	—36 17	15 12 57 492	+3.797	— .048	
426	31	Libræ	ε	5.6	4	— 9 44	15 15 31.885	+3.240	— .035	
427	9	Serpentis		5.6	3	+16 00	15 18 22.120	+2.776	+ .240	
428	32	Libræ	ζ^1	6	3	—16 09	15 19 14.567	+3.362	— .203	
429	10	Serpentis		5.6	1	+ 2 24	15 20 33.631	+3.024	+ .281	
430	3	Cor. Bor.	β	4	1	+29 40	15 21 13.681	+2.483	— .409	
431	34	Libræ	ζ^3	6	2	—16 03	15 21 39.094	+3.363	+ .124	
432	35	Libræ	ζ^4	6	3	—16 18	15 23 53.427	+3.370	+ .497	
433		Lupi	γ	4	1	—40 37	15 24 30.649	+3.957	+ .319	
434	11	Serpentis		6	1	— 0 38	15 24 43.045	+3.079	— .155	
435	5	Cor. Bor.	α	2	10	+27 15	15 27 54.902	+2.528	+ .542	+ .036
436	42	Libræ	χ	5.6	1	—23 17	15 30 50 225	+3.524	+ .405	
437	43	Libræ	κ	5	3	—19 09	15 32 44.420	+3.438	+ .170	
438	19	Serpentis	τ^3	6	1	+16 33	15 33 37.761	+2.749	+ .301	
439	24	Serpentis	α	2.3	10	+ 6 56	15 36 23.427	+2 939	+ .137	— .007
440	1	Scorpii	b	5	8	—25 16	15 41 22.158	+3.585	+ .388	
441	2	Scorpii	A^1	5	9	—24 51	15 44 01.136	+3.579	+ .530	
442	5	Scorpii	ρ	4	1	—28 44	15 47 01.130	+3.679	+ .046	
443	6	Scorpii	π	3.4	6	—25 39	15 49 11.105	+3.606	+ .015	
444	7	Scorpii	δ	3	3	—22 09	15 50 53.027	+3.527	— .043	
445	50	Libræ		6	5	— 7 57	15 52 09.688	+3.226	— .012	
446	8	Scorpii	β^1	2	11	—19 22	15 56 08.588	+3.473	— .092	+ .013
447	45	Serpentis	g^1	6	3	+10 20	15 59 59.357	+2.857	— .207	
448	47	Serpentis		6	1	+ 8 58	16 00 45.515	+2.885	+ .375	
449	7	Herculis	κ^1	5.6	2	+17 29	16 00 51.091	+2.703	+ .241	
450	1	Ophiuchi	δ	3	10	— 3 17	16 05 57.999	+3.138	+ .319	— .033

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									A. S. C.	N. A.
							h. m. s.	*s.*	*s.*	*s.*
451		Scorpii	*d*	5.6	1	—28°12′	16 08 23.250	+3.700	+ .040	
452	20	Scorpii	σ	4	7	—25 12	16 11 28.477	+3.627	+ .157	
453	20	Herculis	γ	3.4	4	+19 32	16 14 51.788	+2.643	+ .158	
454	19	Cor. Bor.	ξ	5	5	+31 16	16 15 51.502	+2.339	— .338	
455	21	Scorpii	α	1	10	—26 04	16 19 36.488	+3.663	— .132	— .003
456	9	Ophiuchi	ω	5	5	—21 07	16 22 39.577	+3.537	— .033	
457	23	Scorpii	τ	3.4	10	—27 53	16 25 56.092	+3.715	+ .062	
458	33	Herculis		7	4	+ 7 26	16 29 05.455	+2.907	+ .475	
459	24	Scorpii	*m*	5	1	—17 26	16 32 19 460	+3.456	— .060	
460	1908	A. S. C.		6.7	3	—28 12	16 35 00.367	+3.735	+ .047	
461	25	Scorpii		6	1	—25 14	16 37 04.197	+3.656	— .373	
462	43	Herculis	*i*	5	1	+ 8 53	16 38 09.180	+2.872	+ .470	
463	26	Scorpii	ε	3	3	—34 00	16 39 48.773	+3.870	— .017	
464	47	Herculis	*k*	5.6	1	+ 7 32	16 42 33.431	+2.901	+ .111	
465	50	Herculis	*s*	5.6	4	+30 05	16 44 24.365	+2.336	+ .525	
466	1934	A. S. C.		6	1	—16 33	16 46 47.971	+3.444	+ .311	
467	54	Herculis		5.6	3	+18 42	16 48 20.103	+2.638	— .067	
468	27	Ophiuchi	κ	4	2	— 9 38	16 50 05.892	+2.852	+ .032	
469	29	Ophiuchi	*s*	6	2	—18 39	16 52 30.115	+3.499	— .185	
470	58	Herculis	ε	3	4	+31 10	16 54 10.183	+2.293	+ .433	
471	32	Ophiuchi		5.6	2	+14 20	16 55 48.110	+2.740	+ .250	
472	1956	A. S. C.		6	1	— 0 40	16 57 17.550	+3.083	+ .130	
473	60	Herculis		5	2	+12 58	16 57 57.691	+2.771	+ .171	
474	1959	A. S. C.		6	2	— 0 52	16 59 58.492	+3.087	+ .122	
475		Scorpii	η	4	1	—43 01	17 00 42.531	+4.272	+ .381	
476	35	Ophiuchi	η	2.3	1	—15 31	17 01 12.505	+3.426	+ .095	
477	29	Scorpii		6.7	1	—26 47	17 04 16.748	+3.722	— .172	
478	36	Ophiuchi	A	5	4	—26 21	17 05 31.180	+3.671	— .150	
479	64	Herculis	α	3.4	4	+14 35	17 07 21.262	+2.732	+ .412	— .034
480	41	Ophiuchi	•	4.5	2	— 0 15	17 08 24.121	+3.074	— .119	
481	65	Herculis	δ	3.4	2	+25 02	17 08 27.558	+2.460	+ .818	
482	40	Ophiuchi	ρ	5	2	—20 56	17 11 25.162	+3.567	+ .572	
483	42	Ophiuchi	θ	3.4	6	—24 50	17 12 11.407	+3.672	+ .147	
484	70	Herculis	*a*	5.6	1	+24 40	17 14 18.937	+2.467	+ .437	
485	1990	A. S. C.		6	1	—21 17	17 15 08 217	+3.578	+ .187	
486	44	Ophiuchi	*b*	5.6	3	—24 01	17 16 36.320	+3.652	— .010	
487	34	Scorpii	υ	3.4	2	—37 10	17 19 53.748	+4.064	+ .058	
488	51	Ophiuchi	*e*²	5	5	—23 50	17 21 39.538	+3.649	— .262	
489	35	Scorpii	λ	3	1	—36 59	17 22 45.229	+4.060	— .021	
490	76	Herculis	λ	4.5	4	+26 14	17 24 16.325	+2.417	+ .055	
491	55	Ophiuchi	α	2	10	+12 41	17 27 30.585	+2.772	+ .455	+ .021
492		Scorpii	κ	3	4	—38 56	17 31 25.682	+4 139	+ .252	
493	56	Serpentis	ο	4.5	4	—12 47	17 32 25.402	+2.455	+ .082	
494	60	Ophiuchi	β	3	1	+ 4 38	17 35 34.108	+2.960	+ .088	
495	3	Sagittarii	*p*	5	8	—27 46	17 37 29.616	+3.768	+ .436	
496	86	Herculis	μ	4	7	+27 49	17 40 11.994	+2.366	+ .504	
497	87	Herculis		5	2	+25 41	17 42 19.977	+2.427	+ .477	
498	63	Ophiuchi	*z*	6.7	5	—24 51	17 45 03.356	+3.685	+ .066	
499	2051	A. S. C.		6	5	— 4 03	17 48 20.794	+3.162	+ .014	
500	2052	A. S. C.		5	4	—30 14	17 48 49.052	+3.845	+ .252	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan 1.	Annual variation	Diff. in AR from— A. S. C.	Diff. in AR from— N. A.
					h. m. s.	s.	s.	s.
501	89 Herculis	6	1	+26°05′	17 48 57.840	+2.415	− .100	
502	64 Ophiuchi ν	4	1	− 9 45	17 50 13.113	+3.297	+ .173	
503	57 Serpentis ζ	5	3	− 3 40	17 52 01.870	+3.154	+ .100	
504	94 Herculis ν	5	1	+30 12	17 52 22.614	+2.291	+ .434	
505	67 Ophiuchi ο	4	2	+ 2 57	17 52 37.952	+2.999	+ .202	
506	10 Sagittarii γ^2	4	5	−30 25	17 55 31.968	+3.852	− .242	
507	2085 A. S. C.	5	7	−28 28	17 57 57.181	+3.792	+ .341	
508	72 Ophiuchi S^2	4	1	+ 9 33	17 59 45.751	+2.843	+ .161	
509	13 Sagittarii μ^1	3.4	10	−21 06	18 04 11.744	+3 586	+ .294	+ .024
510	Sagittarii g	5.6	1	−27 06	18 08 02.396	+3.751	+ .246	
511	19 Sagittarii δ	3.4	5	−29 53	18 10 45.172	+3.835	+ .392	
512	20 Sagittarii ε	3	1	−34 27	18 13 33.188	+3 983	+ .038	
513	Herculis	6	3	+28 58	18 14 11.683	+2.334		
514	107 Herculis t	5	5	+28 48	18 14 46.714	+2.335	+ .454	
515	22 Sagittarii λ	4	4	−25 30	18 18 05.865	+3.704	+ .105	
516	59 Serpentis d	6	3	+ 0 07	18 19 01.350	+3.066	+ .100	
517	2132 A. S. C.	6	6	−18 30	18 22 03.709	+3.513	+ .119	
518	Herculis H	6	2	+23 46	18 22 57.985	+2.483	+ .815	
519	2146 A. S. C.	6	1	+23 30	18 26 06.749	+2.491	+ .219	
520	Clypei Sob. q	6	4	−11 06	18 26 08.790	+3.329	+ .100	
521	1 Aquilæ m	5	2	− 8 21	18 26 30.071	+3.263	+ .471	
522	26 Sagittarii	6	7	−23 58	18 32 06.030	+3.657	+ .190	
523	27 Sagittarii φ	4.5	9	−27 09	18 35 39.477	+3.745	− .373	
524	28 Sagittarii	6	2	−22 33	18 36 41.661	+3.616	− .119	
525	4 Aquilæ	5.6	1	+ 1 54	18 36 45.482	+3.024	+ .062	
526	111 Herculis M	5.6	2	+18 01	18 39 57.234	+2.640	+ .014	
527	29 Sagittarii r	6	4	−20 30	18 40 10.373	+3.560	+ .043	
528	30 Sagittarii	6.7	3	−22 20	18 41 13.383	+3.609	+ .163	
529	32 Sagittarii ν^1	5.6	3	−22 56	18 44 30.290	+3.623	+ .040	
530	34 Sagittarii σ	3	10	−26 29	18 45 20 567	+3.722	+ .057	
531	35 Sagittarii ν^2	5	1	−22 52	18 45 26.738	+3.621	+ .078	
532	Sagittarii	5	1	−22 5-	18 45 30.737	+3.620		
533	63 Serpentis θ^1	4.5	5	+ 4 00	18 48 15.963	+2.977	+ .233	
534	Serpentis θ^2	5	3	+ 4 00	18 48 17.586	+2.977	+ .436	
535	9 Aquilæ k	5.6	3	− 6 03	18 48 29.657	+3.207	− .233	
536	64 Serpentis	6	3	+ 2 20	18 49 13.787	+3.015	+ .047	
537	2195 A. S. C.	6.7	2	−22 55	18 51 58.924	+3.619	+ .114	
538	38 Sagittarrii ζ	4	4	−30 06	18 52 25.765	+3.823	+ .165	
539	12 Aquilæ i	5.6	6	− 5 57	18 53 08.165	+3.204	− .005	
540	39 Sagittarii ο	4.5	5	−21 58	18 55 05 670	+3.592	+ .250	
541	Aquilæ		2	− 4 —	18 56 29.734	+3.165		
542	15 Aquilæ h	6	3	− 4 16	18 56 30.730	+3.165	+ .260	
543	40 Sagittarii τ	4	6	−27 54	18 56 56 952	+3.755	+ .382	
544	17 Aquilæ ζ	3	9	+13 38	18 58 03.318	+2.756	+ .448	− .037
545	41 Sagittarii π	4.5	6	−21 16	19 00 14.822	+3.571	+ .182	
546	19 Aquilæ	6	5	+ 5 50	19 01 09.642	+2.937	+ .322	
547	2224 A. S. C.	6.7	4	−21 55	19 02 54.280	+3.586	+ .310	
548	20 Aquilæ B	5	5	− 8 12	19 03 59.816	+3.254	+ .256	
549	42 Sagittarii ψ	6	5	−25 31	19 05 43.616	+3.681	− .155	
550	43 Sagittarii d	5	8	−19 14	19 08 16.327	+3.514	+ .337	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
551	1 Sagittæ	6	3	+20°57′	19 08 23.910	+2.579	— .260	
552	25 Aquilæ ω^1	5.6	4	+11 19	19 10 18.335	+2.813	+ .055	
553	Sagittarii β^2	4	2	—45 05	19 11 38.883	+4.346	— .227	
554	26 Aquilæ f	6	5	— 5 42	19 12 00.267	+3.196	+ .127	
555	Sagittarii α	4.5	2	—40 54	19 12 46.977	+4.170	— .083	
556	2255 A. S. C.	6	2	—28 10	19 14 31.365	+3.747	— .175	
557	47 Sagittarii χ^1	6	5	—24 49	19 15 32.070	+3.654	+ .060	
558	49 Sagittarii χ^3	6	3	—21 16	19 15 48.553	+3.639	+ .023	
559	30 Aquilæ δ	3.4	19	+ 2.48	19 17 25.830	+3.008	+ .440	+ .033
560	Aquilæ	6	3	+ 2.4-	19 20 18.633	+3.009		
561	35 Aquilæ c	6	4	+ 1 38	19 20 55.480	+3.033	+ .380	
562	2276 A. S. C.	6.7	1	—21 38	19 21 24.018	+3.566	+ .188	
563	6 Vulpeculæ b	4.5	5	+24 21	19 22 02.656	+2.502	+ .336	
564	8 Vulpeculæ	6	3	+24 27	19 22 16.620	+2 500	+ .690	
565	6 Cygni β^1	3	11	+27 38	19 24 16.107	+2.416	+ .307	
566	Cygni	4.5	2	+27 4-	19 24 18.543	+2.416		
567	2283 A. S. C.	6.7	1	+20 36	19 25 05.135	+2 600	+ .125	
568	51 Sagittarii h^1	6	3	—25 04	19 26 18.523	+3.650	+ .113	
569	52 Sagittarii h^2	4.5	10	—25 14	19 26 57.892	+3.654	+ .302	
570	39 Aquilæ κ	5	1	— 7 22	19 28 16.910	+3.229	+ .090	
571	4 Sagittæ ϵ	6	3	+16 07	19 30 02.773	+2.712	— .087	
572	44 Aquilæ σ	6	1	+ 5 03	19 31 17.755	+2.960	— .455	
573	45 Aquilæ	6	3	— 0 59	19 32 28.790	+3.090	+ .260	
574	5 Sagittæ α	4	2	+17 39	19 32 56.463	+2.678	+ .133	
575	12 Cygni ϕ	4	5	+29 48	19 33 03.402	+2.365	— .078	
576	6 Sagittæ β	5	4	+17 07	19 33 51.683	+2.691	+ .033	
577	50 Aquilæ γ	3	18	+10 14	19 38 39.157	+2.851	+ .077	+ .025
578	57 Sagittarii	5.6	2	—19 27	19 42 53.791	+3.494	+ .011	
579	53 Aquilæ α	1.2	18	+ 8 27	19 42 58.502	+2.925	+ .072	— .053
580	60 Aquilæ β	3.4	22	+ 6 01	19 47 27.213	+2.944	+ .123	— .005
581	11 Sagittæ	6	3	+16 22	19 50 29.627	+2.721	+ .327	
582	12 Sagittæ γ	4.5	3	+19 04	19 51 38.527	+2.660	+ .507	
583	62 Sagittarii c	4.5	10	—28 09	19 52 48.734	+3.700	+ .314	
584	15 Vulpeculæ g	5	3	+27 19	19 54 30.743	+2.462	+ .493	
585	2358 A. S. C.	6	3	+24 22	19 54 58.033	+2.538	+ .183	
586	16 Vulpeculæ h	5	4	+24 30	19 55 14.662	+2.535	+ .382	
587	63 Aquilæ τ	5 6	2	+ 6 50	19 56 19.363	+2.929	+ .183	
588	65 Sagittarii	6.7	2	—13 07	19 56 32.327	+3.841	+ .637	
589	17 Vulpeculæ i	5.6	6	+23 09	20 00 00.975	+2.573	— .165	
590	65 Aquilæ θ	3.4	2	— 1 17	20 03 02.897	+3 095	+ .157	
591	18 Vulpeculæ	6	4	+26 26	20 03 52.908	+2.499	+ .218	
592	19 Vulpeculæ	6	1	+26 20	20 05 06.896	+2.503	+ .796	
593	5 Capricorni α^1	4	1	—13 00	20 08 46.144	+3.330	— .176	
594	6 Capricorni α^2	3	10	—13 02	20 09 10.382	+3.332	+ .090	+ .087
595	9 Capricorni β^2	3.4	10	—15 17	20 12 01.015	+3.375	+ .255	
596	25 Vulpeculæ	6	3	+23 56	20 15 10.660	+2.575	+ .040	
597	10 Capricorni π	5	8	—18 44	20 18 09.318	+3.443	— .022	
598	Capricorni f	6	3	—22 55	20 20 07.520	+3.532	— .020	
599	41 Cygni i	4.5	5	+29 50	20 22 51.646	+2.446	+ .206	
600	2 Delphini ϵ	4	2	+10 46	20 25 34.184	+2.864	+ .394	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
601	3 Delphini η	6	8	+12°29′	20 26 22.978	+2.831	+ .398	
602	6 Delphini β	4	1	+14 03	20 30 02.880	+2.803	+ .550	
603	71 Aquilæ I	5	1	— 1 39	20 30 04.335	+3 099	+ .245	
604	15 Capricorni υ	5	8	—18 42	20 30 56.142	+3.427	+ .352	
605	9 Delphini α	3.4	1	+15 21	20 32 12.419	+2.779	+ .139	
606	10 Delphini	6	1	+14 01	20 33 46.697	+2.807	+ .197	
607	11 Delphini δ	5	5	+14 30	20 35 59.334	+2.800	+ .024	
608	30 Vulpeculæ	6	1	+24 42	20 37 56.965	+2.594	+ .045	
609	2 Aquarii ε	4.5	1	—10 04	20 39 00.253	+3.252	— .277	
610	13 Delphini λ	6	1	+ 5 25	20 39 52.678	+2.971	— .102	
611	Microscopii α	4.5	4	—34 22	20 39 57.675	+3.771	+ .875	
612	5 Aquarii	6	2	— 6 06	20 43 40.866	+3.177	+ .096	
613	6 Aquarii μ	4.5	2	— 9 35	20 44 01.160	+3.239	+ .180	
614	32 Vulpeculæ q	4.5	5	+27 27	20 47 44.568	+2.552	+ .408	
615	1 Equulei ε	5.6	1	+ 3 41	20 51 04.607	+3.005	+ .157	
616	33 Vulpeculæ x	5.6	3	+21 43	20 51 07.050	+2.678	+ .030	
617	21 Capricorni	6	1	—18 09	20 51 50.953	+3.390	+ .013	
618	22 Capricorni π	5	3	—20 29	20 55 17.430	+3.430	— .080	
619	3 Equulei ζ	6	1	+ 4 52	20 56 36.678	+2.987	+ .538	
620	25 Capricorni χ^1	5.6	1	—21 50	20 59 22.984	+3.419	+ .206	
621	13 Aquarii ν	5	4	—12 01	21 00 52.560	+3.270	+ .760	
622	5 Equulei γ	5	1	+ 9 30	21 02 33.604	+2.912	+ .204	
623	3 Piscis Aust.	6	1	—28 16	21 03 37.401	+3.497	+ .401	
624	64 Cygni ζ	3	5	+29 34	21 06 07.824	+2.548	+ .644	— .008
625	29 Capricorni s	5 6	3	—15 50	21 06 52.997	+3.329	— .313	
626	30 Capricorni r	6	1	—18 39	21 08 58.255	+3.376	— .405	
627	31 Capricorni	7	1	—18 08	21 09 17.893	+3.366	— .537	
628	32 Capricorni ι	5	5	—17 31	21 13 19.778	+3.350	— .152	
629	18 Aquarii A	6	1	—13 34	21 15 26.617	+3.281	+ .267	
630	21 Aquarii	6	1	— 4 14	21 16 55.975	+3.133	— .195	
631	34 Capricorni ζ	4	3	—23 06	21 17 31.403	+3.441	+ .473	
632	36 Capricorni b	5.6	2	—22 30	21 19 35.573	+3.426	+ .643	
633	22 Aquarii β	3	7	— 6 16	21 23 07.890	+3.163	+ .115	— .027
634	8 Piscis Aust.	5.6	2	—26 53	21 26 53.616	+3.490	+ .186	
635	39 Capricorni ε	5	6	—20 11	21 28 06.787	+3.372	+ .027	
636	40 Capricorni γ	4	5	—17 23	21 31 13.164	+3.322	+ .314	
637	42 Capricorni d^1	6	1	—14 45	21 32 50.609	+3.280	+ .159	
638	7 Pegasi T^2	5.6	1	+ 4 57	21 34 14.943	+3.000	+ .173	
639	8 Pegasi ε	2.3	6	+ 9 09	21 36 19 693	+2.914	+ .173	— .029
640	49 Capricorni δ	3.4	5	—16 51	21 38 11.978	+3.304	+ .128	
641	11 Pegasi	5.6	1	+ 1 57	21 39 06.942	+3.042	+ .592	
642	51 Capricorni μ	5	8	—14 18	21 44 33.931	+3.259	+ .601	
643	17 Pegasi	6	5	+11 19	21 49 08.288	+2.924	+ .478	
644	20 Pegasi	5.6	3	+12 21	21 53 17.730	+2.914	+ .400	
645	29 Aquarii x	6	1	—17 44	21 53 40 577	+3.293	—1.113	
646	30 Aquarii	6	1	— 7 17	21 54 51.105	+3.158	+ .015	
647	34 Aquarii α	3	3	— 1 06	21 57 33.767	+3.083	+ .067	— .089
648	33 Aquarii ι	4.5	3	—14 38	21 57 47.277	+3.247	— .183	
619	37 Aquarii	6.7	4	—11 36	22 01 59.325	+3.204	+ .255	
650	Piscis Aust. φ	5.6	1	—25 58	22 04 44 575	+3.384	+ .835	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.	Mag.	No of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
651	16 Piscis Aust. λ	6	1	—28°33′	22 05 13.739	+3.419	+ .409	
652	41 Aquarii F	6	2	—21 52	22 05 27.243	+3.327	+ .153	
653	43 Aquarii θ	4.5	5	— 8 35	22 08 23.128	+3.163	+ .218	
654	45 Aquarii D	6	2	—14 06	22 10 25.133	+3.224	+ .273	
655	30 Pegasi	5	5	+ 4 59	22 12 24.496	+3.016	+ .316	
656	49 Aquarii	6	2	—25 34	22 14 35.228	+3.354	+ .038	
657	50 Aquarii	6	2	—14 20	22 15 52.392	+3.219	— .048	
658	52 Aquarii π	5	3	+ 0 34	22 17 06.227	+3.063	+ .177	
659	34 Pegasi H^1	5.6	4	+ 3 35	22 18 28.850	+3.033	+ .730	
660	55 Aquarii ζ	5	1	— 0 50	22 20 35.337	+3.077	+ .187	
661	57 Aquarii σ	5	6	—11 29	22 22 10.512	+3.182	— .048	
662	39 Pegasi K	6	1	+19 25	22 24 51.601	+2.878	+ .201	
663	59 Aquarii ν	5.6	4	—21 31	22 25 55.935	+3.280	+ .185	
664	62 Aquarii η	4	4	— 0 56	22 27 07.948	+3.077	+ .198	
665	63 Aquarii κ	6	6	— 5 03	22 29 28.100	+3.114	— .080	
666	42 Pegasi ζ	3	9	+10 00	22 33 29.007	+2.983	+ .247	+ .003
667	44 Pegasi η	3	2	+29 23	22 35 30.622	+2.796	+ .382	
668	20 Piscis Aust. ψ^1	6	3	—26 04	22 36 44.927	+3.302	— .033	
669	45 Pegasi	6	4	+18 32	22 37 41.455	+2.910	+ .525	
670	47 Pegasi λ	4.5	1	+22 44	22 38 49.627	+2.873	— .583	
671	70 Aquarii	6	1	—11 24	22 40 04.721	+3.161	— .539	
672	71 Aquarii τ^2	5	5	—14 26	22 41 06.812	+3.185	— .148	
673	48 Pegasi μ	4	2	+23 46	22 42 17.137	+2.872	+ .757	
674	73 Aquarii λ	4	11	— 8 26	22 44 15.865	+3.133	+ .345	
675	24 Piscis Aust. α	1	12	—30 28	22 48 47.721	+3.311	+ .271	+ .112
676	3 Piscium x^2	6	10	— 0 40	22 52 25.527	+3.073	+ .007	
677	54 Pegasi α	2	15	+14 21	22 56 47.717	+2.977	+ .257	— .033
678	5 Piscium A	6	3	+ 1 16	23 00 29.233	+3.061	+ .503	
679	88 Aquarii c^2	4.5	5	—22 02	23 00 54.298	+3.208	— .142	
680	59 Pegasi p	5.6	2	+ 7 51	23 03 39.602	+3.023	— .108	
681	60 Pegasi	6	4	+25 59	23 04 03.775	+2 910	+ .085	
682	90 Aquarii φ	5	2	— 6 55	23 06 02.229	+3.106	+ .439	
683	61 Pegasi	6	2	+27 23	23 07 58.020	+2.911	+ .500	
684	6 Piscium γ	4.5	3	+ 2 25	23 08 52.207	+3.108	+ .087	
685	Ap. Sculp. γ	5	1	—33 24	23 10 10.379	+3.261	+ .109	
686	96 Aquarii	6	1	— 6 00	23 11 05.897	+3.098	+ .057	
687	62 Pegasi τ	5.6	2	+22 52	23 12 43.443	+2.952	— .627	
688	98 Aquarii b^1	5	2	—20 58	23 14 33 547	+3.170	+ .327	
689	68 Pegasi υ	5	3	+22 31	23 17 24.147	+2.965	+ .567	
690	8 Piscium κ^1	5.6	3	+ 0 23	23 18 43.807	+3.067	+ .867	
691	70 Pegasi q	5	2	+11 53	23 21 03.857	+3.020	+ .297	
692	13 Piscium	6.7	1	— 1 58	23 23 44.947	+3.076	+ .507	
693	101 Aquarii b^4	5	4	—21 48	23 24 53.678	+3.151	— .142	
694	71 Pegasi, y	5	1	+21 37	23 25 27 790	+2.968	+ .240	
695	16 Piscium	6	4	+ 1 13	23 28 13.358	+3.064	— .262	
696	17 Piscium ι	4.5	10	+ 4 45	23 31 43.300	+3.056	+ .200	+ .035
697	18 Piscium λ	5	10	+ 0 54	23 33 52.900	+3.066	— .110	
698	106 Aquarii A^3	5.6	1	—19 10	23 35 53.891	+3.118	+ .181	
699	107 Aquarii A^4	6	2	—19 34	23 37 41.752	+3.115	+ .162	
700	20 Piscium n	5.6	5	— 3 39	23 39 42.866	+3.076	+ .326	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1840.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
701	21 Piscium		6	1	+ 0°11′	23 41 15.481	+3.068	— .479	
702	79 Pegasi		6	2	+27 57	23 41 34.294	+3.010	+1.004	
703	22 Piscium		6	5	+ 2 02	23 43 46.470	+3.065	+ .210	
704	25 Piscium		6.7	2	+ 1 12	23 44 53.118	+3.066	+ .518	
705	26 Piscium		6.7	3	+ 6 11	23 46 56.813	+3.060	+ .203	
706	84 Pegasi	ψ	5	2	+24 15	23 49 36.880	+3.040	— .050	
707	27 Piscium	p	5	1	— 4 27	23 50 28.953	+3.073	+ .663	
708	27 Piscium	ω	4.5	4	+ 5 59	23 51 05 845	+3.062	+ .005	
709	29 Piscium	q	5	2	— 3 55	23 53 37.198	+3.071	+ .518	
710	32 Piscium	c^2	6	3	+ 7 36	23 54 19.260	+3.063	+ .410	
711	2 Ceti	g	4	1	—18 14	23 55 32.156	+3.078	— .184	
712	33 Piscium	s	5	1	— 6 36	23 57 08.425	+3.070	— .025	
713	86 Pegasi	k	6	1	+12 30	23 57 29.406	+3.064	— .184	

ASTRONOMICAL OBSERVATIONS AT WASHINGTON.

1841.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 2	η Piscium	4	+14°32′	31.5	53.7	1 24 16.1	38.6	0.8
2		101 Piscium	6	+13 51	49.5	11.5	1 28 34.0	56.4	18.5
*3		105 Piscium	6	+15 36	39.0	1.2	1 32 23.8	46.5	8.7
4		109 Piscium	6.7	+19 17	46.9	9.5	1 37 32.6	55.7	18.5
*5		193 A. S. C.	6	+21 29	53.0	16.0	1 42 39.4	2.7	25.8
6		β Arietis	3	+20 02	23.1	46.1	1 47 09.3	32.5	55.5
*7		λ Arietis	5.6	+22 49	35.3	58.5	1 50 22.1	45.8	9. (
*8		α Piscium	5.6	+ 2 00	23.6	45.0	1 55 07.0	28.9	50.3
9		α Arietis	3	+22 42	43.8	7.1	1 59 30.6	54.2	17.5
10		15 Arietis	6	+18 45	21.2	43.9	2 03 07.0	29.9	52.5
11		ξ^1 Ceti	5	+ 8 06	8.5	30.2	2 05 52.1	14.2	35.9
12		F Ceti	6	— 7 08	37.5	59.1	2 10 21.0	42.9	4.5
13		69 Ceti	6	— 0 19	22.6	44.0	2 15 05.7	27.5	48.9
14		Moon I	(10.1)	+13 51	30.7	54.2	2 18 17.8	41.4	4.8
15		26 Arietis	6.7	+19 08	16.0	38.6	2 23 01.0	24.5	47.2
16		265 A. S. C.	6.7	+ 6 47	13.5	35.0	2 27 57.0	19.0	40.5
17		ν Arietis	5.6	+21 16	19.0	42.3	2 31 05.6	29.0	52.3
18		γ Ceti	3	+ 2 34	38.6	0.2	2 36 21.9	43.6	4.9
19		π Arietis	5	+16 48	58.5	20.7	2 41 43.5	6.3	28.6
20	3	265 A. S. C.	6.7	+ 6 47	12.0	33.6	2 27 55.6	17.6	39.0
21		ν Arietis	5.6	+21 16	18.0	40.6	2 31 04.4	28.2	50.7
22		γ Ceti	3	+ 2 34	37.1	58.4	2 36 20.3	42.1	3.5
23		π Arietis	5	+16 48	56.7	19.2	2 41 42.1	4.9	27.3
24		312 A. S. C.	7	+15 50	52.0	14.6	2 45 37.3	0.0	22.5
25		ε Arietis	5	+20 43	38.0	0.7	2 51 24.2	47.7	10.4
*26		α Ceti	2.3	+ 3 28	31.5	53.0	2 55 14.8	36.6	58.1
27		53 Arietis	6	+17 16	0.3	22.8	2 59 45.5	8.3	31.0
28		δ Arietis	4	+19 07	3.4	26.0	3 03 49.2	12.5	35.3
29		ζ Arietis	5	+20 27	17.0	40.0	3 07 03.0	26.0	49.0
30		59 Arietis	6.7	+26 30	54.8	19.0	3 11 43.3	7.6	31.6
31		g Arietis	5.6	+24 09	25.0	48.3	3 16 12.1	36.0	59.2
32		Moon I	(11.1)	+23 42	19.5	43.4	3 19 07.9	32.4	56.3
33		17 Eridani	4.5	— 5 37	17.0	38.5	3 24 00.5	22.5	44.0
34		t^2 Eridani	4	—22 10	16.0	39.0	3 28 02.5	26.0	49.0
35		21 Eridani	6	— 6 08	43.5	5.0	3 32 26.9	48.8	10.3
36		b Pleiadum	4.5	+23 37	56.2	19.5	3 36 43.3	7.1	30.5
*37		η Tauri	3	+23 37	31.9	55.6	3 39 19.3	43.0	6.5
38		f Pleiadum	5	+23 34	12.8	36.0	3 40 59.7	23.4	46.6
*39		426 A. S. C.	6	—38 07	6.0	33.3	3 44 01.0	28.7	56.0
40		l Eridani	5.6	—25 07	26.0	49.5	3 48 13.5	37.6	1.3
41		γ^1 Eridani	2.3	—13 58	8.8	31.1	3 51 53.5	15.9	38.0
*42		A^1 Tauri	5	+21 38	48.3	11.5	3 56 35.0	58.5	21.8
*43	4	b Pleiadum	4.5	+23 37	55.1	18.7	3 36 42.4	6.1	29.8
*44		η Tauri	3	+23 37	31.3	54.6	3 39 18.4	42.2	5.5
*45		f Pleiadum	5	+23 34	11.7	35.2	3 40 59.0	22.8	46.3
46		l Eridani	5.6	—25 07	25.1	49.0	3 48 13.0	37.0	1.0
47		γ^1 Eridani	2.3	—13 58	8.2	30.4	3 51 52.7	15.1	37.5
*48		A^1 Tauri	5	+21 38	47.7	10.6	3 56 34.1	57.6	20.5
49		A Eridani	6	—28 06	31.5	56.0	4 00 20.5	45.0	9.5
50		45 Tauri	6	+ 5 06	25.4	46.9	4 04 08.7	30.5	52.0
51		39 Eridani	5	—10 39	22.0	43.8	4 08 06.0	28.2	50.0

January 2, 3, 4.—No error of level or collimation.
No. 5. A fine double star; observed the brighter.
8. Double; one star estimated of the 5.6 and the other 7th magnitude.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m	s.	m.	s.	s.	h.	m.	s.	
1	24	16.14	— .213			+1	16.11	—0.91	1	22	59.82	1
1	28	33.98	— .217				.11		1	27	17.65	2
1	32	23.84	— .205				.11		1	31	07.58	*3
1	37	32.64	— .177				.10		1	36	16.36	4
1	42	39.38	— .160				.10		1	41	23.12	*5
1	47	09.30	— .172				.10		1	45	53.08	6
1	50	22.14	— .165				.10		1	49	05.88	*7
1	55	06.96	— .300				.09		1	53	50.57	*8
1	59	30.64	— .151	+1	16.13		.09		1	58	14.40	9
2	03	06.90	— .182				.09		2	01	50.63	10
2	05	52.18	— .259				.09		2	04	35.83	11
2	10	21.00	— .362				.08		2	09	04.56	12
2	15	05.74	— .316				.08		2	13	49.34	13
2	18	17.78	— .217				.08		2	17	01.48	14
2	23	01.56	— .178				.08		2	21	45.30	15
2	27	57.00	— .267				.07		2	26	40.66	16
2	31	05.64	— .162				.07		2	29	49.41	17
2	36	21.84	— .296	+1	16.11		.07		2	35	05.47	18
2	41	43.52	— .196			+1	16.06	—0.91	2	40	27.26	19
2	27	55.56	— .134			+1	14.79	—0.97	2	26	40.64	20
2	31	04.38	— .084				.79		2	29	49.51	21
2	36	20.28	— .148	+1	14.71		.79		2	35	05.34	22
2	41	42.04	— .098				.79		2	40	27.15	23
2	45	37.28	— .102				.78		2	44	22.40	24
2	51	24.20	— .083				.78		2	50	09.34	25
2	55	14.80	— .145		14.78		.78		2	53	59.88	*26
2	59	45.58	— .096				.78		2	58	30.70	27
3	03	49.28	— .086				.77		3	02	34.42	28
3	07	03.00	— .084				.77		3	05	48.15	29
3	11	43.26	— .060				.77		3	10	28.43	30
3	16	12.12	— .069				.76		3	14	57.29	31
3	19	07.90	— .071				.76		3	17	53.07	32
3	24	00.50	— .176				.76		3	22	45.56	33
3	28	02.50	— .236				.76		3	26	47.50	34
3	32	26.90	— .178				.75		3	31	11.97	35
3	36	43.32	— .072				.75		3	35	28.50	36
3	39	19.26	— .072		14.81		.75		3	38	04.44	*37
3	40	59.70	— .072				.75		3	39	44.88	38
3	44	01.00	— .309				.74		3	42	45.95	*39
3	48	13.58	— .218				.74		3	46	58.59	40
3	51	53.46	— .205	+1	14.77		.74		3	50	38.52	41
3	56	35.02	— .234			+1	14.74	—0.97	3	55	20.05	*42
3	36	42.42	— .029			+1	14.13	—0.62	3	35	28.26	*43
3	39	18.40	— .029	+1	14.00		.13		3	38	04.24	*44
3	40	59.00	— .029				.13		3	39	44.84	*45
3	48	13.02	— .099				.13		3	46	58.79	46
3	51	52.78	— .082	+1	14.21		.13		3	50	38.57	47
3	56	34.10	— .031				.13		3	55	19.94	*48
4	00	20.50	— .104				.12		3	59	06.28	49
4	04	08.70	— .056				.12		4	02	54.52	50
4	08	06.00	— .077			+1	14.12	—0.62	4	06	51.80	51

No. 39. Double; one of the 6th and one of the 7th magnitude.
3, 7, 26, 42, 43, 48. Two stars in the field of the instrument.
37, 41. Four stars in the field.
45. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 4 cont'd.	λ^1 Tauri	6	+13°39′	32.5	54.5	4 12 16.8	39.2	1.2
2		σ^2 Eridani	6	−26 06	23.5	47.5	4 16 11.8	36.0	59.9
3		43 Eridani	4.5	−34 23	27.8	54.1	4 19 20.3	46.5	12.8
4		Moon I	(12.2)	+26 52	55.5	20.3	4 25 45.2	10.2	36.0
5		α Tauri	1	+16 11	19.4	41.5	4 28 04.3	27.0	49.2
6		τ Tauri	5	+22 39	12.0	35.2	4 33 58.8	22.4	45.6
7		q Orionis	4	+ 6 41	45.5	7.0	4 42 28.9	50.9	12.5
*8		ω Eridani	5	− 5 43	38 0	59.5	4 46 21.3	43.2	4.8
*9		s Orionis	5.6	+ 1 28	31.5	13.1	4 51 34.9	56.7	18.3
10		ι Tauri	4.5	+21 21	5.7	28.8	4 54 52.2	15.6	38.8
11	8	15 Argus	3.4	−23 51	20.7	44.2	8 02 08.0	31.8	56.3
12		1004 A. S. C.	7	+18 09	40.3	3.0	8 06 26.0	49.0	11.3
13		θ Cancri	4	+ 9 40	30.6	52.3	8 09 14.4	36.5	58.4
14		λ Cancri	6	+24 31	38.1	1.6	8 12 25.6	49.5	13.3
15		f Cancri	7	+11 08	50.4	12.2	8 16 34.3	56.5	18.3
16		υ^2 Cancri	6.7	+24 40	44.4	8.0	8 20 31.9	55.8	19.6
17		η Cancri	6	+20 59	5.2	28.2	8 24 51.6	15.0	37.9
*18		1044 A. S. C.	6	+ 7 10	1.2	22.8	8 28 44.6	6.7	28.3
19		η Pixid. Naut.	6	−25 42	38.2	2.0	8 32 26.2	50.4	19.3
20		δ Cancri	4.5	+18 44	14.0	6.6	8 36 59.6	22.6	45.2
21		ε Hydræ	4	+ 7 00	58.6	20.3	8 39 42.2	4.2	25.8
*22		ρ^2 Cancri	6	+28 56	38.5	3.2	8 44 28.0	52.8	17.5
23		α^1 Cancri	6	+12 14	51.2	13.1	8 48 35.8	57.6	19.5
24		ν Cancri	6	+25 05	59.2	23 0	8 54 47.1	11.2	35.0
25		ω Hydræ	6	+ 5 43	13.5	35.0	8 58 57.0	19.0	40.5
26		Moon II	(16.3)	+17 39	37.0	59.9	9 02 23.4	47.0	9.9
27		π^2 Cancri	6	+15 36	3.0	25.2	9 07 47.8	10.4	32.6
28		q Cancri	7	+18 23	41.5	4.0	9 11 27.0	50.0	12.5
29		θ Pixid. Naut.	5	−25 17	0.8	24.5	9 15 48.6	12.8	36.5
30		α Hydræ	2	− 7 58	23.6	45.2	9 21 07.8	29.5	51.3
31		ξ Leonis	5.6	+12 00	59.0	20.9	9 24 43.1	5.3	27.2
32	11	1299 A. S. C.	5	−36 17	52.5	19.0	10 50 46.0	13.0	39.5
*33		d Leonis	5.6	+ 4 28	3.9	25.5	10 53 47.2	9.0	30.5
34		χ Leonis	4.5	+ 8 12	31.3	53.1	10 58 15.0	37.1	58.8
35		67 Leonis	6	+25 31	55.2	19.0	11 01 43.0	7.0	30.8
36		δ Leonis	3	+21 24	18.6	41.6	11 07 05.0	28.4	51.5
37		q Leonis	5.6	+ 2 53	49.5	11.0	11 10 32.7	54.5	16.0
38		σ Leonis	4	+ 6 54	38.8	0.3	11 14 22.2	44.2	5.8
39		γ Hyd. & Crat.	4	−16 49	37.9	0.2	11 18 23.0	45.8	8.3
40		85 Leonis	6	+16 17	5.8	28.1	11 22 50.8	13.5	35.9
41		ξ Hyd. & Crat.	4	−30 59	47.6	12.6	11 26 38.0	3.5	28.6
42		υ Leonis	4.5	+ 0 08	31.5	53.0	11 30 14.8	36.5	57.9
43		92 Leonis	5.6	+22 14	10.2	33.2	11 33 56.7	20.2	43.3
44		ξ^1 Virginis	5	+ 9 09	47.5	9.2	11 38 31.2	53.3	15.0
45		β Leonis	2.3	+15 28	38.0	0.2	11 42 22.8	45.5	7.7
46		Moon II	(19.5)	+ 1 34	33.8	55.7	11 44 17.9	40.1	2.0
47		29 Hyd. & Crat.	6	−27 35	13.2	37.5	11 49 02.0	26.5	50.8
48		b Virginis	5.6	+ 4 32	31.0	52.4	11 53 14.3	36.2	57.5
49	12	β Arietis	3	+20 02	32.6	55.5	1 47 18.5	41.5	4.5

January 8.—Clear. No errors of level or collimation.
11.—Cirro-cumuli. Adjustments, level, and collimation, as 8th.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
4	12	16.84	— .044			+1	14.12	—0.62	4	11	02.68	1
4	16	11.74	— .101				.12		4	14	57.52	2
4	19	20.30	— .116				.12		4	18	06.06	3
4	25	45.24	— .023				.11		4	24	31,11	4
4	28	04.28	— .040	+1	14.14		.11		4	26	50.13	5
4	33	58.80	— .030				.11		4	32	44.66	6
4	42	28.96	— .054				.11		4	41	14.80	7
4	46	21.36	— .071				.11		4	45	07.18	*8
4	51	34.90	— .061				.10		4	50	20.74	*9
4	54	52.22	— .032			+1	14.10	—0.62	4	53	38.09	10
8	02	08.00	— .709	+1	18.68	+1	18.52	+1.45	8	00	48.77	11
8	06	25.92	— .271				.52		8	05	07.13	12
8	09	14.44	— .362				.53		8	07	55.55	13
8	12	25.62	— .199				.53		8	11	06.89	14
8	16	34.34	— .346				.53		8	15	15.46	15
8	20	31.94	— .197				.54		8	19	13.20	16
8	24	51.58	— .240				.54		8	23	32.80	17
8	28	44.72	— .387				.54		8	27	25.79	*18
8	32	26.22	— .731				.55		8	31	06.94	19
8	36	59.60	— .266				.55		8	35	40.78	20
8	39	42 22	— .388		18.52		.56		8	38	23.27	21
8	44	28.00	— .144				.56		8	43	09.30	*22
8	48	35.34	— .334				.56		8	47	16.45	23
8	54	47.10	— .193				.57		8	53	28.34	24
8	58	57.00	— .401				.57		8	57	38.03	25
9	02	23.44	— .277				.58		9	01	04.58	26
9	07	47.80	— .299				.58		9	06	28.92	27
9	11	27.00	— .270				.59		9	10	08.14	28
9	15	48.64	— .728				.59		9	14	29.32	29
9	21	07.38	— .539	+1	18.48		.60		9	19	48.24	30
9	24	43.10	— .337			+1	18.60	+1.45	9	23	24.16	31
10	50	46.00	— .839			+1	24.21	+1.83	10	49	20.95	32
10	53	47.22	— .396				.21		10	52	22.61	*33
10	58	15.06	— .361				.22		10	56	50.48	34
11	01	43.00	— .179				.22		11	00	18.60	35
11	07	05.02	— .226	+1	24.36		.23		11	05	40.56	36
11	10	32.74	— .412				.23		11	09	08.11	37
11	14	22.26	— .373				.24		11	12	57.65	38
11	18	23.04	— .604				.24		11	16	58.20	39
11	22	50.82	— .281				.25		11	21	26.29	40
11	26	38.06	— .768				.25		11	25	13.04	41
11	30	14.74	— .440				.26		11	28	50.04	42
11	33	56,72	— .216				.26		11	32	32.24	43
11	38	31 24	— .352				.27		11	37	06.62	44
11	42	22.84	— .289	+1	24.25		.27		11	40	58.28	45
11	44	17.90	— .425				.28		11	42	53.20	46
11	49	02.00	— .723				.28		11	47	37.00	47
11	53	14.32	— .396			+1	24.29	+1.83	11	51	49.63	48
1	47	18.52	— .241			+1	25.35	+1.83	1	45	52.93	49

Nos. 8, 9, 22, 33. Two stars in the field of the instrument.
18. A double star, that observed being of the 6th and its companion of the 7th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 30	γ Ceti	3	+ 2°34′	11.5	33.0	2 36 54.7	16.5	38.0
2		ε Arietis	5	+20 42	12.5	35.5	2 50 58.7	22.0	45.0
3		Moon I	(8.2)	+22 10	51.6	15.4	2 53 39.5	3.6	27.3
4		δ Arietis	4	+19 07	38.0	0.5	3 03 23.7	47.0	9.5
5	Feb. 2	β Orionis	1	— 8 23	8.0	29.8	5 07 51.8	13.9	35.8
6		629 A. S. C.	6	+29 24	14.8	39.7	5 12 04.6	29.6	54.5
7		β Tauri	2	+28 28	24.2	48.4	5 17 13.1	37.8	2.1
8		ι Orionis	5	— 1 13	54.6	16.2	5 22 37.9	59.6	21.0
9		α Leporis	3.4	—17 56	56.0	18.5	5 26 41.8	4.2	26.8
10		ε Orionis	2.3	— 1 19	23.8	45.2	5 29 07.0	28.8	50.3
11		α Columbæ	2	—34 10	59.7	25.6	5 34 52.0	18.5	44.5
12		B Tauri	5	+24 30	26.7	50.5	5 40 14.2	38.0	1.8
13		C Tauri	5	+27 34	30.2	54.2	5 44 18.7	43.4	7.4
14		α Orionis	1	+ 7 22	48.8	10.2	5 47 32.2	54.1	15.5
15		H Geminorum	5	+23 16	39.0	2.3	5 55 25.9	49.6	13.0
16		E^1 Orionis	6	+19 49	49.0	11.6	6 03 34.8	58.1	20.6
*17		f^2 Orionis	6	+16 11	28.6	51.0	6 07 13.6	36.2	58.5
18		Moon I	(11.4)	+27 13	34.5	58.8	6 11 24.0	49.4	13.6
19		μ Geminorum	3	+22 35	32.5	55.6	6 14 19.2	42.7	5.8
*20		15 Geminorum	6.7	+20 53	30.5	53.5	6 19 16.8	40.0	2.8
*21		D^1 Canis Maj.	5	—32 29	24.0	49.2	6 23 15.1	41.0	6.5
*22		g Monocerotis	6	+ 7 41	25.0	46.4	6 27 08.3	30.1	51.6
23		ν^3 Canis Maj	5.6	—18 06	7.0	29.5	6 31 52.4	15.4	38.0
24		ε Geminorum	3	+25 17	20.3	43.8	6 35 07.9	32.0	55.5
25		α Canis Maj.	1	—16 30	22.0	44.3	6 39 07.0	29.6	51.8
26	3	μ Geminorum	3	+22 35	34.0	57.2	6 14 20.8	44.5	7.8
*27		15 Geminorum	6.7	+20 53	31.8	55.0	6 19 18.2	41.5	4.5
*28		D^1 Canis Maj.	5	—32 29	25.5	50.8	6 23 16.6	42.5	7.8
29		g Monocerotis	6	+ 7 41	26.3	48.0	6 27 09.9	31.9	53.5
30		ν^3 Canis Maj.	5.6	—18 06	8.5	31.0	6 31 54.0	17.0	39.5
31		ε Geminorum	3	+25 17	21.6	45.3	6 35 09.3	33.4	57.1
32		α Canis Maj.	1	—16 30	23.8	45.8	6 39 08.6	31.5	53.6
33		π^1 Canis Maj	5.6	—20 02	54.7	18.0	6 47 40.8	3.6	26.8
34		ε Canis Maj.	2 3	—28 46	33.6	58.3	6 53 22.9	47.5	12.1
35		o^2 Canis Maj.	4	—23 36	36.3	59.7	6 57 23.5	47.2	10.5
36		τ Geminorum	5	+30 30	11.5	36.5	7 02 01.7	27.0	51.9
37		z Geminorum	6	+28 10	11.8	36.1	7 07 01.3	26.5	50.8
*38		δ Geminorum	3.4	+22 16	51.2	14.5	7 11 38.1	1.7	24.9
39		ι Geminorum	4	+28 07	2.5	26.8	7 16 51.5	16.3	40.6
40		Moon I	(12.4)	+24 50	18.0	42.4	7 20 07.1	31.9	56.3
41		k Geminorum	5	+16 10	47.5	9.6	7 25 32.5	55.0	17.2
42		α Canis Min.	1.2	+ 5 37	15.5	37.2	7 31 58.9	20.7	42.4
43		β Geminorum	2	+28 24	46.5	10.8	7 36 35.5	0.3	24.6
*44	4	α Canis Min.	1.2	+ 5 37	16.2	37.7	7 31 59.7	21.6	43.2
45		β Geminorum	2	+28 24	47.2	11.6	7 36 36.3	1.0	25.5
46		B Geminorum	7	+23 32	17.3	40.6	7 40 04.3	28.0	51.6
*47		ξ Argus	4.5	—24 28	30.3	13.6	7 43 37.6	1.6	25.0
48		968 A. S. C.	6.7	+ 9 17	10.5	32.3	7 47 54.3	16.4	37.9
*49		11 Argus	5.6	—22 27	15.8	39.2	7 51 02.7	26.2	49.6
50		8 Cancri	6	+13 34	29.9	51.7	7 57 14.2	36.7	58.5

January 30.—Observations interrupted by clouds. Since preceding observations, set the chronometer back 1*m*.
February 2.—Clear. No error level or collimation.
3.—Clear.
4.—Clear. All the adjustments examined.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
2	35	54.74	+ .594	+0	50.21	+0	50.17	+1.93	2	35	05.16	1
2	50	58.74	+ .834				.19		2	50	08.88	2
2	53	39.48	+ .310				.19		2	52	49.60	3
3	03	23.74	+ .356			+0	50.21	+1.93	3	02	33.89	4
5	07	51.86	— .123	+0	56.04	+0	56.17	+1.85	5	06	55.57	5
5	12	04.64	— .031				.17		5	11	08.44	6
5	17	13.12	— .034		56.22		.18		5	16	16.91	7
5	22	37.86	— .107				.18		5	21	41.57	8
5	26	41.36	— .147		56.23		.19		5	25	45.02	9
5	29	07.02	— .108		56.15		.19		5	28	10.72	10
5	34	52.06	— .193		56.38		.20		5	33	55.67	11
5	40	14.24	— .045				.21		5	39	17.99	12
5	44	18.78	— .035				.21		5	43	22.54	13
5	47	32.16	— .088		56.11		.22		5	46	35.85	14
5	55	25.96	— .049				.23		5	54	29.68	15
6	03	34.82	— .058				.24		6	02	38.52	16
6	07	13.58	— .067				.24		6	06	17.27	*17
6	11	24.06	— .038				.25		6	10	27.77	18
6	14	19.16	— .051		56.34		.25		6	13	22.86	19
6	19	16.72	— .055				.26		6	18	20.41	*20
6	23	15.16	— .187				.26		6	22	18.71	*21
6	27	08.28	— .087				.27		6	26	11.92	*22
6	31	52.46	— .122				.27		6	30	56.07	23
6	35	07.90	— .043				.28		6	34	11.58	24
6	39	06.94	— .143	+0	56.22	+0	56.28	+1.85	6	38	10.52	25
6	14	20.86		+0	58.08	+0	58.05	+1.24	6	13	22.81	26
6	19	18.20					.05		6	18	20.15	*27
6	23	16.64					.05		6	22	18.59	*28
6	27	09.92					.06		6	26	11.86	29
6	31	54.00					.06		6	30	55.94	30
6	35	09.34					.06		6	34	11.28	31
6	39	08.66			58.08		.07		6	38	10.59	32
6	47	40.78					.07		6	46	42.71	33
6	53	22.88			58.11		.08		6	52	24.80	34
6	57	23.44					.08		6	56	25.36	35
7	02	01.72					.09		7	01	03.63	36
7	07	01.30					.09		7	06	03.21	37
7	11	38.08			58.11		.09		7	10	39.99	*38
7	16	51.54					.10		7	15	53.44	39
7	20	07.14					.10		7	19	09.04	40
7	25	32.36					.11		7	24	34.25	41
7	31	58.94			58.12		.11		7	31	00.83	42
7	36	35.54		+0	58.02	+0	58.12	+1.24	7	35	37.42	43
7	31	59.64		+0	58.82	+0	58.81	+0.40	7	31	00.83	*44
7	36	36.32			58.80		.81		7	35	37.51	45
7	40	04.36					.81		7	39	05.55	46
7	43	37.62					.81		7	42	38.81	*47
7	47	54.28					.81		7	46	55.47	48
7	51	02.70					.81		7	50	03.89	*49
7	57	14.20				+0	58.81	+0.40	7	56	15.39	50

Nos. 17, 20, 21, 22, 27, 28, 38, 44, 47, 49. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Feb. 4 cont'd.	15 Argus	3.4	—23°51′	0.5	23.7	8 01 47.6	11.5	34.8
2		1004 A. S. C.	7	+18 09	20.7	43.3	8 06 06.2	29.2	51.9
3		21 Argus	6.7	—15 48	21.9	44.2	8 11 07.0	29.6	51.9
4		d^1 Cancri	6.7	+18 50	31.2	53.8	8 15 16.8	40.8	2.6
5		1029 A. S. C.	6	—23 32	26.0	49.3	8 19 13.0	36.8	0.3
6		Moon I	(13.4)	+20 35	47.7	11.1	8 25 35.0	59.0	22.4
7		δ Hydræ	4	+ 6 15	32.0	53.6	8 30 15.5	37.3	59 0
8		δ Cancri	4.5	+18 44	54.4	17.1	8 36 40.1	3.2	25.8
9		ε Hydræ	4	+ 7 00	39.0	0.5	8 39 22.4	44.4	6.0
10		54 Cancri	6.7	+15 56	26.4	48.5	8 43 11.2	34.0	56.2
11		ρ^4 Cancri	6	+28 32	20.3	44.6	8 47 09.4	34.2	58.5
12		α^2 Cancri	5	+12 28	4.5	26.3	8 50 48.6	11.0	32.9
13	5	δ Cancri	4.5	+18 44	54.5	17.2	8 36 40.1	3.1	25.8
14		ε Hydræ	4	+ 7 00	39.1	0.5	8 39 22.4	44.3	5.8
15		54 Cancri	6.7	+15 56	26.4	48.5	8 43 11.2	34.0	56.2
16		ρ^4 Cancri	6	+28 32	20.2	44.6	8 47 09.3	34.0	58.5
17		α^2 Cancri	5	+12 28	4.5	26.2	8 50 48.6	11.0	32.6
18		ν Cancri	6	+25 06	40.0	3.5	8 54 27.5	51.5	14.7
19		κ Cancri	5.6	+11 18	25.3	47.0	9 00 09.2	31.4	53.1
20		ε Pixid. Naut.	6	—29 43	23.7	48.6	9 04 13.7	38.8	3.6
21		K^2 Hydræ	6	— 5 42	5.7	27.2	9 09 49.3	11.7	32·8
*22		27 Hydræ	5.6	— 8 53	0.9	22.5	9 13 44.6	6.6	28.3
23		λ Pixid. Naut.	5.6	—28 09	32.0	56.2	9 17 20.8	45.5	9.6
24		α Hydræ	2	— 7 58	4.4	26.0	9 20 47.8	9.7	31.3
25		*h* Leonis	6	+10 25	43.6	5.2	9 24 27.4	49.6	11.3
26		Moon II	(14.5)	+14 57	6.6	29.3	9 28 52.5	15.6	38.4
27		ο Leonis	4	+10 37	57.1	19.0	9 33 41.2	3.3	25.3
28		ε Leonis	3	+24 30	3.5	27.0	9 37 50.9	14.8	38.4
29		20 Leonis	7	+21 55	11.0	34.0	9 41 57.5	21.0	44.0
30		*d* Sextantis	6.7	— 7 22	56.0	17.5	9 45 39.3	1.2	23.0
31		ν Leonis	5.6	+13 12	57.0	19.1	9 50 41.4	3.8	25 8
32		α Leonis	1	+12 45	11.0	33.0	10 00 55.4	17.8	39.8
33	6	ο Leonis	4	+10 37	57.6	19.4	9 33 41.5	3.6	25.5
34		ε Leonis	3	+24 30	3.6	27.2	9 37 51.1	15.1	38.7
35		20 Leonis	7	+21 55	11.2	34.2	9 41 57.8	21.4	44.4
36		*d* Sextantis	6 7	— 7 22	56.3	18.0	9 45 39.9	1.9	23.5
37		ν Leonis	5.6	+13 12	57.4	19.7	9 50 42.0	4.2	26.5
38		1199 A. S. C.	6	—12 32	8.2	30.2	9 55 52.6	15.0	36.8
39		α Leonis	1	+12 45	11.6	33.7	10 00 56.0	18.3	40.3
40		1215 A. S. C.	7	— 6 32	39.5	1.2	10 04 23.1	45.0	6.5
*41		ζ Leonis	4.5	+24 13	5.0	28.7	10 08 52.5	16.4	40.0
42		γ Leonis	2	+20 39	28.2	51.0	10 12 14.2	37.3	0.2
43		Moon II	(15.5)	+ 7 58	35.2	57.3	10 25 19.8	42.3	4.3
44	7	*u* Leonis	6	+ 1 35	51.2	12.7	10 48 34.5	56.2	17.8
45		*d* Leonis	5	+ 4 28	40.5	2.0	10 53 23.7	45.5	7.1
*46		χ^1 Hyd. & Crat.	5	—26 26	55.5	19.5	10 58 43.7	8.0	32.0
47		10 Hyd. & Crat.	5.6	—27 13	17.2	41.2	11 02 05.8	30.4	54.4
48		δ Leonis	3	+21 24	55.3	18.5	11 06 41.9	5.4	28.5
49		δ Hyd & Crat.	3.4	—13 55	42.0	4.2	11 12 26.6	49.0	11.2
50		Moon II	(16.6)	+ 1 07	41.6	3.6	11 18 25.8	48.2	10.3

February 4.—☾ ☌ δ Cancri.
6.—No instrumental errors; observations interrupted by clouds.
7.—Passing cumuli at the commencement of the observations. Adjustments as on the 6th.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	.
8	01	47.62		+0	58.83	+0	58.81	+0.40	8	00	48.81	1
8	06	06.26					.82		8	05	07.44	2
8	11	06.92					.82		8	10	08.10	3
8	15	16.84					.82		8	14	18.02	4
8	19	13.08					.82		8	18	14.26	5
8	25	35.04					.82		8	24	36.22	6
8	30	15.48					.82		8	29	16.66	7
8	36	40.12					.82		8	35	41.30	8
8	39	22.46		+0	58.80		.82		8	38	23 64	9
8	43	11.26					.83		8	42	12.48	10
8	47	09.40					.83		8	46	10.57	11
8	50	48.66				+0	58.83	+0.40	8	49	49.83	12
8	36	40.14	— .056			+0	58.88	+0.31	8	35	41.20	13
8	39	22.42	— .079	+0	58.68		.88		8	38	23.46	14
8	43	11.26	— .060				.88		8	42	12.32	15
8	47	09.32	— .031				.88		8	46	10.41	16
8	50	48.58	— .068				.88		8	49	49.63	17
8	54	27.44	— .039				.88		8	53	28.52	18
9	00	09.20	— .071				.88		8	59	10.25	19
9	04	13.68	— .160				.89		9	03	14.63	20
9	09	49.26	— .106				.89		9	08	50.26	21
9	13	44.58	— .112				.89		9	12	45.58	*22
9	17	20.82	— .156				.89		9	16	21.77	23
9	20	47.84	— .111		58.91		.89		9	19	48.84	24
9	24	27.42	— .072				.89		9	23	28.46	25
9	28	52.48	— .063				.89		9	27	53.53	26
9	33	41.18	— .072				.89		9	32	42.22	27
9	37	50.90	— .040		59.14		.89		9	36	51.97	28
9	41	57.50	— .047				.89		9	40	58.56	29
9	45	39.40	— .119				.90		9	44	40.38	30
9	50	41.40	— .066				.90		9	49	42.43	31
10	00	55.40	— .067	+0	58.81	+0	58.90	+0.31	9	59	56.43	32
9	33	41.52				+0	59.42	+0.70	9	32	42.10	33
9	37	51.14		+0	59.41		.42		9	36	51.72	34
9	41	57.80					.42		9	40	58.38	35
9	45	39.92					.42		9	44	40.50	36
9	50	41.96					.43		9	49	42.53	37
9	55	52.56					.43		9	54	53.13	38
10	00	55.98		+0	59.46		.43		9	59	56.55	39
10	04	23.06					.43		10	03	23.63	40
10	08	52.52					.43		10	07	53.09	*41
10	12	14.18					.44		10	11	14.74	42
10	25	19.78				+0	59.44	+0.70	10	24	20.34	43
10	48	34.48				+1	00.68	+1.44	10	47	33.80	44
10	53	23.76					.68		10	52	23.08	45
10	58	43.74					.69		10	57	43.05	*46
11	02	05.80					.69		11	01	05.11	47
11	06	41.92		+1	00.80		.69		11	05	41.23	48
11	12	26.60		+1	00.67		.70		11	11	25.90	49
11	18	25.90				+1	00.71	+1.44	11	17	25.19	50

No. 22. Two stars in the field of the instrument.
41. A star of the 6th magnitude precedes ζ Leonis 6s.75.
46. χ^2 Hyd. & Crat. follows 34s.80.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Feb. 7	85 Leonis	6	+16°18′	42.9	5.0	11 22 27.8	30.5	12.8
*2	cont'd.	17 Hyd & Crat.	6	—28 23	38.0	2.2	11 25 27.1	51.8	16.1
3		υ Leonis	4.5	+ 0 03	8.2	29.6	11 29 51.3	13.0	34.4
4		92 Leonis	5.6	+22 14	47.2	10.3	11 33 33.7	57.2	20.3
5		ζ Hyd.& Crat.	4	—17 28	0.0	22.6	11 37 45.3	8.1	30.8
6		β Leonis	2.3	+15 28	15.0	37.1	11 41 59.7	22.3	44.4
7		β Virginis	3.4	+ 2 40	44.2	5.8	11 43 27.6	49.4	11.0
8	9	5 Comæ Ber.	6	+21 26	24.3	47.3	12 05 10.7	34.2	57.2
9		γ Corvi	3	—16 39	0.0	22.4	12 08 45.0	7.6	30.2
10		η Virginis	3.4	+ 0 13	10.1	31.6	12 12 53.3	15.1	36.5
11		f Comæ Ber.	5.6	+26 59	38.3	2.3	12 17 26.6	51.0	15.0
12		u Centauri	4	—38 09	8.8	36.0	12 21 03.6	31.3	58.5
13		η Corvi	4.5	—15 19	15.3	37.3	12 25 00.0	22.5	44.6
14		β Corvi	2.3	—22 31	23.0	46.3	12 27 09.7	33.1	56.4
15		1459 A. S. C.	6.7	— 3 30	56.5	18.0	12 31 39.8	1.6	23.0
16		γ¹ Virginis	4	— 0 35	0.0	21.5	12 34 43.2	5.0	26.5
17		33 Virginis	6	+10 26	40.8	2.6	12 39 24.6	46.8	8.7
18		30 Comæ Ber.	6	+28 25	50.3	14.5	12 42 39.2	4.0	28.5
19		q Comæ Ber.	5	+22 07	48.2	11.3	12 46 34.9	58.4	21.5
20		r Comæ Ber.	4.5	+18 16	25.0	47.6	12 52 10.5	33.5	56.0
21		ε Virginis	3.4	+11 49	38.3	0.2	12 55 22.5	44.8	6.7
22		Moon II	(18.6)	—11 46	57.0	19.3	12 59 41.9	4.6	27.0
23		θ Virginis	4.5	— 4 41	6.6	28.1	13 02 50.0	11.9	33.5
24		55 Virginis	6	—19 06	2.0	24.8	13 06 47.8	10.8	33.5
25		γ Hydræ con.	4.5	—22 20	37.5	0.6	13 11 24.2	47.8	11.0
26		α Virginis	1	—10 20	12.2	34.0	13 17 56.2	18.4	40.2
27	10	θ Virginis	4.5	— 4 41	8.0	29.5	13 02 51.2	13.0	34.4
28		55 Virginis	6	—19 06	3.2	25.8	13 06 49.0	12.2	35.0
29		γ Hydræ con.	4.5	—22 20	38.6	1.6	13 11 25.2	48.9	11.8
30		α Virginis	1	—10 20	13.3	35.2	13 17 57.4	19.6	41.4
31		u Hydræ con.	7.8	—22 27	23.4	46.5	13 22 10.2	33.9	57.1
32		h Virginis	6	— 9 21	0.2	22.0	13 25 44.0	6.0	27.8
*33		f Hydræ con.	6.7	—25 41	20.1	44.0	13 29 08.2	32.3	56.1
*34		1 Bootis	6	+20 46	26.7	49.5	13 34 12.8	36.1	59.0
35		g Hydræ con.	6	—25 19	5.7	29.4	13 37 53.5	17.5	41.2
36		g Centauri	5	—33 39	32.0	57.2	13 41 23.0	48.8	14.1
37		h Centauri	5	—31 08	22.0	47.0	13 45 12.5	38.0	2.7
38		η Bootis	3	+19 12	28.8	51.7	13 48 14.8	38.0	0.8
39		Moon II	(19.7)	—16 33	23.9	47.0	13 50 10.3	33.6	56.7
40		τ Virginis	4.5	+ 2 19	58.0	19.3	13 54 41.2	3.0	24.5
41		θ Centauri	2	—35 35	35.5	2.0	13 58 28.8	55.5	22.0
42		y Virginis	7	— 9 35	56.6	18.5	14 01 40.7	2.8	24.4
43		κ Virginis	4	— 9 32	49.2	11.0	14 05 33.1	55.2	17.0
44		α Bootis	1	+20 01	46.5	9.2	14 09 32.5	55.7	18.4
45		λ Virginis	5	—12 38	54.5	16.5	14 11 38.7	0.9	22.9
46	11	α Bootis	1	+20 01	45.7	8.6	14 09 31.8	55.0	18.0
47		λ Virginis	5	—12 38	54.0	16.0	14 11 38.2	0.5	22.5
48		2 Libræ	6	—10 59	16.0	37.9	14 16 00.0	22.3	44.3
49		8 Hydræ con.	5.6	—28 46	11.0	35.3	14 20 00.3	25.2	49.5
50		ρ Bootis	4	+31 04	15.4	40.3	14 26 05.7	31.1	56.0

Feb. 9, 10, 11.—Clear. Instrumental errors of collimation and level less than the unavoidable errors of observation.

Nos. 2. 17 Hyd. & Crat. is double; the stars of equal magnitude. (*No note was made showing which was observed.* 1846.)

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
11	22	27.80				+1	00.71	+1.44	11	21	27.09	1
11	25	27.04					.71		11	24	26.33	*2
11	29	51.30					.72		11	28	50.58	3
11	33	33.74					.72		11	32	33.02	4
11	37	45.36					.72		11	36	44.64	5
11	41	59.70		+1	00.67		.73		11	40	58.97	6
11	43	27.60				+1	00 73	+1.44	11	42	26.87	7
12	05	10.74	— .128			+1	04.60	+1.66	12	04	06.01	8
12	08	45.04	— .344				.60		12	07	40.10	9
12	12	53.32	— .249				.60		12	11	48.47	10
12	17	26.64	— .085				.61		12	16	21.95	11
12	21	03.64	— .496				.61		12	19	58.53	12
12	24	59.94	— .336				.62		12	23	54.98	13
12	27	09.70	— .380	+1	04.61		.62		12	26	04.70	14
12	31	39.78	— .270				.63		12	30	34.88	15
12	34	43.24	— .254				.63		12	33	38.36	16
12	39	24.70	— .193				.64		12	38	19.87	17
12	42	39.30	— .082				.64		12	41	34.58	18
12	46	34.86	— .124				.64		12	45	30.10	19
12	52	10.52	— .148				.65		12	51	05.72	20
12	55	22.50	— .186				.65		12	54	17.66	21
12	59	41.96	— .316				.66		12	58	36.98	22
13	02	50.02	— .276				.66		13	01	45.08	23
13	06	47.78	— .359				.67		13	05	42.75	24
13	11	24.22	— .379				.67		13	10	19.17	25
13	17	56.20	— .308	+1	04.69	+1	04.68	+1.66	13	16	51.21	26
13	02	51.22	+ .104			+1	06.25	+0.37	13	01	45 07	27
13	06	49.04	+ .134				.25		13	05	42.92	28
13	11	25.22	+ .143				.25		13	10	19.11	29
13	17	57.38	+ .115	+1	06.26		.25		13	16	51.24	30
13	22	10.22	+ .142				.25		13	21	04.11	31
13	25	44 00	+ .113				.25		13	24	37.86	32
13	29	08.14	+ .150				.25		13	28	02.04	*33
13	34	12.82	+ .050				.25		13	33	06.62	*34
13	37	53.46	+ .149				.25		13	36	47.36	35
13	41	23.04	+ .172				.25		13	40	16.96	36
13	45	12.44	+ .164				.26		13	44	06.34	37
13	48	14.82	+ .054		06.29		.26		13	47	08.61	38
13	50	10.30	+ .129				.26		13	49	04.17	39
13	54	41.20	+ .089				.26		13	53	35.03	40
13	58	28.76	+ .129				.26		13	57	22.63	41
14	01	40.60	+ .114				.26		14	00	34.45	42
14	05	33.10	+ .114				.26		14	04	26.95	43
14	09	32.46	+ .051	+1	06.24		.26		14	08	26.25	44
14	11	38.70	+ .120			+1	06.26	+0.37	14	10	32.56	45
14	09	31.82	— .120	+1	05.40	+1	05.44	—1.60	14	08	26.26	46
14	11	38.24	— .281				.44		14	10	32.52	47
14	16	00.10	— .112				.44		14	14	54.55	48
14	20	00.26	— .363				.43		14	18	54.47	49
14	26	05.70	— .056			+1	05.43	—1.60	14	25	00.21	50

No. 33. *f* Hydræ con. is double; one star estimated of the 6.7 and the other of the 7th magnitude.
34. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Feb. 11 cont'd.	1651 A. S. C.	6.7	−11°38′	56.0	17.9	14 29 40.1	2.2	24.0
*2		ζ Bootis	3.4	+14 25	55.7	18.0	14 34 40.5	3.0	25.3
3		ε Bootis	3	+27 45	20.9	45.0	14 39 09.5	34.0	58.2
4		Moon II	(20.7)	−21 05	52.5	16.2	14 41 40.2	4.2	27.9
*5		α^2 Libræ	3	−15 23	28.4	50.3	14 43 12.8	35.3	57.2
6		ξ^1 Libræ	6	−11 15	8.4	30.3	14 46 52.5	14.7	36.6
*7		18 Libræ	7	−10 30	41.1	3.0	14 51 25.1	47.2	9.1
8		20 Libræ	3.4	−24 39	6.2	29.8	14 55 53.7	17.6	41.3
9		*c* Bootis	5	+25 30	38.0	1.8	15 01 26.0	50.2	13.9
10		ι^1 Libræ	5.6	−19 11	1.5	54.2	15 04 17.2	40.3	3.0
11	12	20 Libræ	3.4	−24 39	5.0	28.6	14 55 52.6	16.7	40.2
12		*c* Bootis	5	+25 30	36.0	59.7	15 01 23.7	47.8	11.6
13		ι^1 Libræ	5.6	−19 11	30.0	52.8	15 04 15.8	38.8	1.5
14		β Libræ	2.3	− 8 47	49.0	10.6	15 09 32.9	55.1	16.5
*15		o^1 Libræ	7	−14 58	29.3	51.5	15 13 14.0	36.5	58.8
16		ε Libræ	5.6	− 9 45	56.6	18.3	15 16 40.4	2.5	24.2
17		ζ^1 Libræ	6	−16 09	38.3	0.6	15 20 23.2	45.9	8.2
18		ζ^4 Libræ	6	−16 18	17.2	39.5	15 25 02.1	24.8	47.2
19		α Cor. Bor.	2	+27 15	13.2	37.3	15 29 01.7	26.1	50.2
20		Moon II	(21.7)	−24 42	47.5	11.6	15 34 36.3	1.0	25.2
21		α Serpentis	2.3	+ 6 56	47.5	9.1	15 37 31.0	53.0	14.6
*22		*b* Scorpii	5	−25 16	43.3	7.2	15 42 31.3	55.4	29.3
23		A^1 Scorpii	5	−24 51	22.5	46.0	15 45 10.1	34.1	57.6
24		δ Scorpii	3	−22 10	15.2	38.1	15 52 01.6	25.2	48.1
25		*r* Herculis	6	+18 16	24.6	47.2	15 55 10.1	33.0	55.6
*26		ω^2 Scorpii	4.5	−20 26	24.4	47.3	15 59 10.6	34.0	56.8
27	27	ε Canis Maj.	2.3	−28 46	55.1	19.5	6 52 44.5	9.4	33.7
28		τ Geminorum	5	+30 30	32.7	57.5	7 01 22.9	48.3	13.2
*29		*m* Monocerotis	4.5	− 0 14	23.3	44.7	7 04 06.4	28.2	49.6
*30		δ Geminorum	3.4	+22 16	12.5	35.8	7 10 59.3	22.8	46.1
31		A Geminorum	6	+25 21	20.8	44.6	7 14 08.6	32.7	56.5
32		β Canis Min.	3	+ 8 36	9.6	31.4	7 18 53.4	15.4	37.2
*33		*k* Geminorum	5.6	+16 10	8.5	30.4	7 24 53.6	16.8	38.8
34		α Canis Min.	1.2	+ 5 38	37.0	58.6	7 31 20.4	42.3	3.8
35		β Geminorum	2	+28 24	7.7	32.1	7 35 56.9	21.7	46.0
36	28	*b* Pleiadum	4.5	+23 37	0.8	24.2	3 35 47.9	11.6	35.1
37		η Tauri	3	+23 37	36.8	0.1	3 38 23.9	47.8	11.2
38		μ Tauri	5	+ 8 29	32.0	53.6	4 07 15.6	37.5	59.0
39		γ Tauri	3.4	+15 14	21.6	43.8	4 11 06.4	29.0	51.2
40		δ^2 Tauri	4.5	+17 04	32.5	54.6	4 15 17.5	40.4	2.6
41		α Tauri	1	+16 11	24.7	47.1	4 27 09.7	32.3	54.7
42		53 Eridani	4	−14 37	30.8	53.0	4 31 15.4	37.8	0.0
43		54 Eridani	4	−19 59	4.7	27.4	4 33 50.6	13.8	36.5
44		Moon I	(7.5)	+26 47	14.4	39.0	4 38 04.2	29.4	54.0
45		*r* Orionis	4	+ 5 20	22.7	44.3	4 43 06.1	28.0	49.6
46		e^2 Orionis	5	+13 16	3.5	25.5	4 47 47.8	10.2	32.2
47		ι Tauri	4.5	+21 21	11.3	34.8	4 53 57.6	21.0	44.0
48		β Orionis	1	− 8 23	32.0	53.5	5 07 15.5	37.5	59.0
49		α Columbæ	5	−35 08	14.0	40.2	5 12 06.6	33.0	59.5
50		β Tauri	2	+28 23	47.7	12.0	5 16 36.8	1.6	26.0

February 12.—Clear. Adjustments of level and collimation as yesterday.

27.—Clear. Since preceding observations, set back the chronometer. No errors of level or collimation. δ Geminorum is seen double, the brighter star of the 3.4 magnitude, and its companion of the 8th.

28.—No change in level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	29	40.04	— .276			+1	05.42	—1.60	14	28	34.34	1
14	34	40.50	— .149				.42		14	33	34.93	*2
14	39	09.52	— .076	+1	05.38		.41		14	38	04.03	3
14	41	40.10	— .139				.41		14	40	34.55	4
14	43	12.80	— .334	+1	05.50		.41		14	42	07.06	*5
14	46	52.50	— .274				.40		14	45	46.83	6
14	51	25.10	— .270				.40		14	50	19.43	*7
14	55	53.72	— .345				.39		14	54	47.99	8
15	01	25.98	— .089				.39		15	00	20.50	9
15	04	17.24	— .314			+1	05.38	—1.60	15	03	11.55	10
14	55	52.62	—1.321			+1	03.03	—2.40	14	54	48.27	11
15	01	23.76	— .345				.02		15	00	20.40	12
15	04	15.78	—1.209				.02		15	03	11.55	13
15	09	32.82	—1.007	+1	03.06		.01		15	08	28.80	14
15	13	14.02	—1.125				.00		15	12	09.90	*15
15	16	40.40	—1.007				03.00		15	15	36.39	16
15	20	23.24	—1.148				02.99		15	19	19.10	17
15	25	02.16	—1.148				.98		15	23	58.03	18
15	29	01.70	— .306		03.00		.98		15	27	58.41	19
15	34	36.32	—1.053				.97		15	33	32.30	20
15	37	31.04	— .713	+1	02.89		.96		15	36	27.37	21
15	42	31.30	—1.323				.96		15	41	27.02	*22
15	45	10.06	—1.321				.95		15	44	05.79	23
15	52	01.64	—1.272				.94		15	50	57.43	24
15	55	10.10	— .484				.93		15	54	06.69	25
15	59	10.62	—1.209			+1	02.93	—2.40	15	58	06.48	*26
6	52	44.44	— .601	+0	19.37	+0	19.35	+0.87	6	52	24.49	27
7	01	22.92	— .096				.36		7	01	03.46	28
7	04	06.44	— .360				.36		7	03	46.72	*29
7	10	59.30	— .176		19.31		.36		7	10	39.76	*30
7	14	08.64	— .147				.36		7	13	49.13	31
7	18	53.40	— .291				.37		7	18	33.74	32
7	24	53.62	— .229				.37		7	24	34.02	*33
7	31	20.42	— .314		19.43		.37		7	31	00.74	34
7	35	56.88	— .117	+0	19.37	+0	19.37	+0.87	7	35	37.39	35
3	35	47.92	— .096			+0	20.00	+1.80	3	35	27.82	36
3	38	23.96	— .096	+0	20.20		.00		3	38	03.86	37
4	07	15.54	— .169				.04		4	06	55.33	38
4	11	06.40	— .187				.04		4	10	46.22	39
4	15	17.52	— .129				.05		4	14	57.34	40
4	27	09.70	— .184		20.07		.06		4	26	49.51	41
4	31	15.40	— .274				.07		4	30	55.06	42
4	33	50.60	— .301				.07		4	33	30.23	43
4	38	04.20	— .077				.07		4	37	44.05	44
4	43	06.14	— .183				.08		4	42	45.88	45
4	47	47.82	— .146				.09		4	47	27.58	46
4	53	57.64	— .101				.09		4	53	37.45	47
5	07	15.50	— .247		19.91		.11		5	06	55.14	48
5	12	06.66	— .387				.12		5	11	46.15	49
5	16	36.82	— .068	+0	20.17	+0	20.12	+1.80	5	16	16.63	50

Nos. 2, 5, 7. 15, 22, 26, 29, 30. Two stars in the field of the instrument.
33. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Feb. 28	β Leporis	4	—20°53′	1.6	24.5	5 21 47.8	11.0	34.0
*2	cont'd.	δ Orionis	2	— 0 25	31.9	53.3	5 24 15.1	36.8	58.3
3		ε Orionis	2.3	— 1 19	47.5	9.0	5 28 30.7	52.4	13.9
4		α Columbæ	2	—34 10	23.1	49.0	5 34 15.5	41.9	7.7
5	March 1	ι Tauri	4.5	+21 21	13.5	36.6	4 53 59.9	23.2	46.3
6		*m* Tauri	5	+18 26	42.2	4.8	4 58 27.7	50.7	13.3
7		β Orionis	1	— 8 23	34.2	55.8	5 07 17.8	39.8	1 5
8		β Tauri	2	+28 28	50.3	14.6	5 16 39.4	4.2	28.5
9		ϑ Leporis	4	—20 53	3.7	26.9	5 21 50.1	13.4	36.6
10		δ Orionis	2	— 0 25	34.2	55.6	5 24 17.3	39.1	0.5
11		ε Orionis	2 3	— 1 19	49.8	11.4	5 28 33.1	54.9	16.5
12		O Tauri	6	+14 25	49.7	12.0	5 38 34.5	57.0	19.3
13		C Tauri	4.5	+27 34	56.3	20.5	5 43 45.0		
14		Moon I	(8.5)	+27 24		0.5	5 44 25.8	51.0	15.6
15		α Orionis	1	+ 7 22	15.0	36.5	5 46 58.4	20.4	41 9
16		59 Orionis	6	+ 1 49	50.5	11.8	5 50 33.6	55.4	16.8
17		χ^4 Orionis	5.6	+19 41	41.7	4.2	5 54 27.5	50.7	13.4
18		ρ Leporis	5.6	—16 29	32.7	55.2	5 58 17.7	40.3	2.8
19		κ Aurigæ	4	+29 33	50.5	15.0	6 05 40.0	5.0	29.5
20		*l* Orionis	6	+10 00	1.5	23.4	6 08 45.6	7.8	29.7
21		μ Geminorum	3	+22 35	58 8	22.0	6 13 45.6	9.2	32.4
22	3	51 Geminorum	5	+16 25	0.5	23.0	7 04 45.5	8.0	30.5
23		δ Geminorum	3.4	+22 16	22.0	45.2	7 11 08.7	32 2	55.3
24		β Canis Min.	3	+ 8 36	18.8	40.5	7 19 02.6	24.7	46.3
25		δ^1 Canis Min.	6	+ 2 15	37.8	59.3	7 24 21.2	43.0	4.4
26		ν Geminorum	5	+27 15	49.8	14.1	7 26 38.4	2.8	27.0
*27		α Canis Min.	1.2	+ 5 38	46.0	7.5	7 31 29.5	51.4	12.8
28		β Geminorum	2	+28 24	17.0	41.5	7 36 06.2	31.0	55.3
29		ο Arg. in pup.	5.6	—25 33	11.6	35.4	7 41 59.5	23.7	47.5
30		*l* Geminorum	6	+20 18	8.2	31.0	7 46 54.2	17.5	40.2
31		3 Cancri	6	+17 44	26.3	49.0	7 52 11.8	34.6	57.3
32		Moon I	(10.6)	+22 24	13.0	36.7	7 56 01.0	26.2	49.0
33		15 Argus	3.4	—23 51	30.2	53.6	8 01 17.5	41.3	4.7
34		λ Cancri	6	+24 31	48.5	12.1	8 11 36.0	0.0	23.6
35		22 Argus	6	—12 33	5.2	27.0	8 15 49.5	12.0	33 8
36		θ Cancri	5.6	+18 38	17.0	39.8	8 23 02.6	25.5	48.3
37	6	α Leonis	1	+12 45	46.3	8.3	10 00 30.6	52.9	14.9
38		γ Leonis	2	+20 39	2.6	25.5	10 11 48.7	12.0	35.0
39	7	δ Leonis	3	+21 24	30.2	53.3	11 06 16.7	40.2	3.2
*40		φ Leonis	5	— 2 47	29.2	50.6	11 09 12.4	34.2	55.7
41		σ Leonis	4	+ 6 54	50.5	12.0	11 13 34.0	56.0	17.5
42		ε Hyd.&Crat.	5	— 9 59	28.5	50.5	11 17 12.6	34.8	56.8
43		ξ Hyd.&Crat.	4	—30 59	59.1	24.4	11 25 49.5	14.9	39.4
44		υ Leonis	4.5	+ 0 03	43 2	4.6	11 29 26.4	48.2	9.6
*45		γ Cephei	3	+76 45		46.4	11 33 22.9	57.6	
46		ζ Hyd.& Crat.	5	—17 28	35.0	57.5	11 37 20.3	43.2	5.7
47		β Leonis	2.3	+15 28	49.8	12.1	11 41 34.7	57.3	19.5
48		Moon II	(14.7)	— 1 31	23 4	45.3	11 43 07.5	29.8	51.7
49		γ Ursæ Maj.	2	+54 35	51.4	28.5	11 46 06.2	44.0	21.1
50		*b* Virginis	5.6	+ 4 32	42.9	4.3	11 52 26.1	48.0	9.5

March 1.—Clear; examined adjustments; no error of level or collimation.
3.—Same as 1st.
6.—Observations interrupted by clouds.
7.—Cumuli at commencement of observations.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
5	21	47.78	— .305			+0	20.13	+1.80	5	21	27.35	1
5	24	15.08	— .211	+0	20.19		.13		5	23	54.74	*2
5	28	30.70	— .215		20.06		.13		5	28	10.36	3
5	34	15.44	— .379	+0	20.07	+0	20.14	+1.80	5	33	54.92	4
4	53	59.90	+ .097			+0	22.88	+2.80	4	53	37.12	5
4	58	27.74	+ .110				.89		4	58	04.96	*6
5	07	17.82	+ .223	+0	22.72		.90		5	06	55.14	7
5	16	39.40	+ .061		22.96		.92		5	16	16.54	8
5	21	50.14	+ .277				.92		5	21	27.50	9
5	24	17.34	+ .190		22.83		.93		5	23	54.60	10
5	28	33.14	+ .194		22.88		.94		5	28	10.39	11
5	38	34.50	+ .128				.96		5	38	11.67	12
5	43	45.00	+ .067				.97		5	43	22.10	13
5	44	25.60	+ .067				.97		5	44	02.70	14
5	46	58.44	+ .158		23.00		.97		5	46	35.63	15
5	50	33.62	+ .181				.99		5	50	10.81	16
5	54	27.50	+ .115				23.00		5	54	04.61	17
5	58	17.74	+ .257				.01		5	57	54.99	18
6	05	40.00	+ .056				.02		6	05	17.04	19
6	08	45.60	+ .147				.03		6	08	22.72	20
6	13	45.60	+ .091	+0	23.09	+0	23.04	+2.80	6	13	22.65	21
7	04	45.50	— .050			+0	28.75	+2.22	7	04	16 70	22
7	11	08.68	— .039	+0	28.89		.76		7	10	39.88	23
7	19	02.58	— .064				.77		7	18	33.75	24
7	24	21.14	— .085				.78		7	23	52.28	25
7	26	38.42	— .028				.78		7	26	09.61	26
7	31	29.44	— .069		28.73		.79		7	31	00.58	*27
7	36	06.20	— .026		28.83		.80		7	35	37.37	28
7	41	59.54	— .125				.80		7	41	30.62	29
7	46	54.22	— .042				.81		7	46	25.37	30
7	52	11.80	— .047				.82		7	51	42.93	31
7	56	00.98	— .038				.83		7	55	32.11	32
8	01	17.46	— .121	+0	28.74		.83		8	00	48.51	33
8	11	36.04	— .034				.85		8	11	07.16	34
8	15	49.50	— .100				.86		8	15	20.54	35
8	23	02.64	— .046			+0	28.87	+2.22	8	22	33.72	36
10	00	30.60		+0	33.90	+0	33.97	+1.55	9	59	56.63	37
10	11	48.76				+0	33.98	+1.55	10	11	14.78	38
11	06	16.72		+0	35.24	+0	35.24	+1.95	11	05	41.48	39
11	09	12.42					.24		11	08	37.18	*40
11	13	34.00					.24		11	12	58.76	41
11	17	12.64					.25		11	16	37.39	42
11	25	49.46					.25		11	25	14.21	43
11	29	26.40					.26		11	28	51.14	44
11	33	22.30			35.86		.26		23	32	47.04	*45
11	37	20.34					.27		11	36	45.07	46
11	41	34.68			35.20		.27		11	40	59.41	47
11	43	07.54					.28		11	42	32.26	48
11	46	06.24		+0	35.85		.28		11	45	30.96	49
11	52	26.16				+0	35.29	+1.95	11	51	50.87	50

No. 2. Two stars in the field having the same AR.
27, 40. Two stars in the field of the instrument.
45. γ Cephei, sub-polo.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 8	b Virginis	5.6	+ 4°32′	45.5	7.0	11 52 28.8	50.6	12.2
2		1390 A. S. C.	7	+ 6 27	34.5	56.0	11 56 18.0	39.9	1.5
3		α Corvi	4.5	—23 50	6.8	30.2	12 00 54.0	8.0	41.4
4		δ Ursæ Maj.	3	+57 55	51.5	32.0	12 08 13.0	54.0	34.5
5		η Virginis	3.4	+ 0 13	43.6	5.0	12 12 26.8	48.6	10.1
*6		ι Corvi	5.6	—23 57	58.8	22.1	12 15 45.8	9.4	33.0
7		1432 A. S. C.	6.7	— 3 44	39.6	1.0	12 20 22.9	44.8	36.3
8		1443 A. S. C.	6.7	— 4 10	25.8	47.2	12 24 09.1	31.0	52.5
9		β Corvi	2.3	—22 31	56.8	20.0	12 26 43.5	7.1	30.2
10		1458 A. S. C.	7	+ 2 44	13.2	34.8	12 30 56.5	18.3	39.8
11		Moon II	(15.8)	— 8 46	29.5	51.7	12 34 14.1	36.6	58.8
12		33 Virginis	6	+10 26	14.5	36.3	12 38 58.5	20.6	42.4
13		30 Comæ Ber.	6	+28 25	24.0	48.3	12 42 13.0	37.8	2.1
14		ψ Virginis	5.6	— 8 40	2.3	24.0	12 46 46.0	8.0	29.7
15		r Comæ Ber.	5	+18 16	58.6	21.2	12 51 44.2	7.2	29.7
16		ε Virginis	3.4	+11 49	12.0	34.0	12 54 56.3	18.6	40.5
17		40 Comæ Ber.	6	+23 28	31.5	55 0	12 59 18.7	42.5	5.8
18		θ Virginis	5	— 4 41	40.6	2.0	13 02 23.9	45.8	7.3
19	14	ε Ursæ Min.	4	+82 17		32.0	17 03 14.5	56.5	
*20		α Herculis	3.4	+14 35	32.2	54.3	17 08 16.8	39.3	1.2
*21		θ Ophiuchi	4	—24 50	21.0	44.6	17 13 08.7	32.8	56.4
*22		d Ophiuchi	5	—29 43	16.5	41.0	17 18 06.2	31 5	56.0
23		e^2 Ophiuchi	5	—23 50	49.6	13.0	17 22 36.7	0.5	24.3
24		α Ophiuchi	2	+12 41	41.8	3.8	17 28 26.1	48.4	10.3
25		o Serpentis	4.5	—12 47	38.0	0.0	17 33 22.3	44.5	6.4
26		p Sagittarii	5	—27 46	38.3	2.5	17 38 27.0	51.5	15.8
27		μ Herculis	4	+27 49	17.8	42.0	17 41 06.0	31.2	55.5
28		ν Ophiuchi	4	— 9 45	25.8	47.5	17 51 09.6	31.8	53.5
29		Moon II	(22.0)	—27 21	20.6	45.4	17 57 10.7	36.0	1.0
30		δ Sagittarii	3.4	—29 53	52.7	17.5	18 11 42.5	7.6	32.4
31	21	β Geminorum	2	+28 24	52.4	16.7	7 36 41.3	6.0	30.5
*32		c Arg. in pup.	4	—37 35	45.5	12.6	7 40 40.0	7.5	34.6
33		φ Geminorum	6	+27 10	3.7	27.8	7 44 52.2	16.7	40.6
34		1 Cancri	6.7	+16 13	19.0	41.2	7 49 03.9	26.5	49.0
35		3 Cancri	6	+17 44	1.4	23.6	7 52 46.6	9.6	32.0
36		Cancri	6	+19 15	54.4	16.9	7 56 40.0	3.0	25.6
37		15 Argus	3.4	—23 51	4.5	27.8	8 01 51.6	15.5	38.8
38		20 Argus	5	—15 19	22.2	44.5	8 07 07.0	29.6	51.8
39		λ Cancri	6.7	+24 31	23.6	47.2	8 12 11.1	35.0	58.6
40		22 Argus	6	—12 33	39.7	1.6	8 16 23.9	46.2	8.2
*41		q Monocerotis	5	— 3 23	5.0	26.6	8 18 48.6	10.5	
*42		2 Hydræ	6	— 3 28			8 19 36.3	58.1	19.7
43		θ Cancri	5.6	+18 38	52.3	15.1	8 23 38.0	1.0	23.8
*44		1044 A. S. C.	6	+ 7 10	46.2	8.0	8 28 29.8	51.6	13.4
*45		39 Cancri	6	+20 34	17.9	40.7	8 32 04.0	27.3	50.0
46		9 Hydræ	5	—15 22	41.5	3.9	8 35 26.4	48.9	11.3
47		ε Hydræ	4	+ 7 00	43.7	5.5	8 39 27.5	49.5	11.0
48		54 Cancri	6.7	+15 56	31.2	53.6	8 43 16.3	39.0	1.3
49		ρ^4 Cancri	6	+28 32	25.5	49.9	8 47 14.6	39.4	3.8
50		α^2 Cancri	5	+12 28	9.4	31.3	8 50 53.6	15.9	37.8
51		ν Cancri	6	+25 05	45.3	9.0	8 54 33.0	57.0	20.7

March 8.—Clear. Adjusted collimation and level.
14.—Passing cumuli. No error of level or collimation.
21.—Clear. No error of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
11	52	28.82	— .071			+0	37.96	+2.57	11	51	50.79	1
11	56	17.98	— .067				.96		11	55	39.95	2
12	00	54.08	— .121				.97		12	00	15.99	3
12	08	13.00	+ .077				37.99		12	07	35.09	4
12	12	26.82	— .078				38.00		12	11	48.74	5
12	15	45.82	— .122				.00		12	15	07.70	*6
12	20	22.92	— .085				.01		12	19	44.83	7
12	24	09.12	— .085				.02		12	23	31.02	8
12	26	43.52	— .120	+0	38.16		.02		12	26	05.38	9
12	30	56.52	— .074				.03		12	30	18.42	10
12	34	14.14	— .093				.04		12	33	36.01	11
12	38	58.46	— .060				.05		12	38	20.35	12
12	42	13.04	— .026				.05		12	41	34.96	13
12	46	46.00	— .093				.06		12	46	07.85	14
12	51	44.18	— .046				.07		12	51	06.06	15
12	54	56.28	— .058				.07		12	54	18.15	16
12	59	18.70	— .036				.08		12	58	40.58	17
13	02	23.92	— .086			+0	38.09		13	01	45.74	18
17	03	14.33	+4.811	+0	50.99	+0	50.96	+2.57	17	02	28.18	19
17	08	16.76	— .400		50.94		.96		17	07	25.40	*20
17	13	08.70	— .928				.97	+2.15	17	12	16.80	*21
17	18	06.24	—1.008				.98		17	17	14.25	*22
17	22	36.82	— .913				50.99		17	21	44.92	23
17	28	26.08	— .426	+0	51.03		51.00		17	27	34.65	24
17	33	22.24	— .755				.00		17	32	30.49	25
17	38	27.02	— .976				.01		17	37	35.03	26
17	41	06.62	— .205				.02		17	40	15.40	27
17	51	09.64	— .204				.03		17	50	18.41	28
17	57	10.74	— .715				.04		17	56	18.99	29
18	11	42.54	— .994			+0	51.06	+2.15	18	10	50.49	30
7	36	41.38	+ .240	+1	04.55	+1	04.48	+2.21	7	35	37.14	31
7	40	40.04	+1.432				.48		7	39	36.99	*32
7	44	52.20	+ .266				.49		7	43	47.98	33
7	49	03.92	+ .465				.50		7	47	59.88	34
7	52	46.64	+ .440				.50		7	51	42.58	35
7	56	39.96	+ .413				.51		7	55	35.86	36
8	01	51.64	+1.182		04.44		.51		8	00	48.26	37
8	07	07.02	+ .925				.52		8	06	03.42	38
8	12	11.10	+ .317				.52		8	11	06.90	39
8	16	23.92	+ .928				.53		8	15	20.32	40
8	18	48.58	+ .781				.53		8	17	44.83	*41
8	19	36.22	+ .783				.53		8	18	32.47	*42
8	23	38.04	+ .423				.54		8	22	33.92	43
8	28	29.80	+ .615				.55		8	27	25.86	*44
8	32	03.98	+ .390				.55		8	30	59.82	*45
8	35	26.40	+ .975				.56		8	34	22.81	46
8	39	27.44	+ .621	+1	04.58		.56		8	38	23.50	47
8	43	16.28	+ .471				.57		8	42	12.18	48
8	47	14.61	+ .237				.58		8	46	10.30	49
8	50	53.60	+ .528				.58		8	49	49.55	50
8	54	33.00	+ .289			+1	04.59	+2.21	8	53	28.70	51

Nos. 6, 20, 21, 22, 41, 42. Two stars in the field of the transit.
32, 45. Three stars in the field
41. Double; the companion estimated to be of the 7.8 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 1	ε Canis Maj.	2.3	—28°45′	8.1	32.6	6 52 57.5	22.3	46.7
2		δ Geminorum	3.4	+22 16	25.8	49.1	7 11 12.5	36.0	59.3
3		α Canis Min.	1.2	+ 5 38	50.2	11.6	7 31 33.5	55.4	16.8
4		β Geminorum	2	+28 24	20.8	45.0	7 36 09.8	34.8	59.0
5		δ Cancri	4.5	+18 44	28.5	51.1	8 36 14.0	37.0	59.6
6		ε Hydræ	4	+ 7 00	13.0	34.6	8 38 56.5	18.4	40.0
*7		ρ^3 Cancri	6	+28 56	53.3	17.7	8 43 42.6	7.5	32.0
8		a^1 Cancri	6	+12 14	5.6	27.6	8 47 50.0	12.5	34.4
9		1098 A. S. C.	7	+18 45	1.3	24.0	8 50 47.3	10.4	33.3
10		ν Cancri	6	+25 05	14.2	37.6	8 54 01.6	25.8	49.4
11		ω Hydræ	6	+ 5 43	28.0	49.5	8 58 11.5	33.5	55.0
12		ξ Cancri	5.6	+22 41	1.5	24.7	9 00 48.3	11.8	35.2
13		1117 A. S. C.	7	+21 56	21.0	44.2	9 05 07.6	31.0	54.2
14		K^2 Hydræ	6	— 5 42	40.1	1.5	9 09 23.4	45.2	6.7
15		1135 A. S. C.	5	+82 00		57.5	9 14 35.0	11.3	
16		α Hydræ	2	— 7 58	38.2	59.8	9 20 21.8	43.9	5.5
17		τ^2 Hydræ	6	— 0 29	44.6	6.1	9 24 27.9	49.7	11.2
18		8 Leonis	6.7	+17 09	6.2	28.5	9 28 51.4	14.4	36.7
19		Moon I	(10.0)	+13 43	53.4	16.1	9 32 38.9	1.7	24.4
20		ο Leonis	4	+10 37			9 33	37.6	59.0
21		ε Leonis	3	+24 30	37.2	0.4	9 37 24.7	48.8	13.0
*22		τ Cephei	5	+70 35			9 40 04.5	10.0	14.5
23		ν Leonis	5.6	+13 12	31.3	53.3	9 50 15.6	37.8	59.8
24		1198 A. S. C.	6.7	+22 43	45.5	8.8	9 54 32.3	55.9	19.2
25		1202 A. S. C.	7	+16 32	53.6	16.0	9 57 38.7	1.5	23.8
26		α Leonis	1	+12 45	45.5	7.4	10 00 29.7	52.0	13.8
27	2	ο Leonis	4	+10 37	32.6	54.3	9 33 16.5	38.7	0 4
28		ε Leonis	3	+24 30	38.7	2.3	9 37 26.2	50.2	13.7
29		s Sextantis	6	+ 5 05	7.0	28.6	9 42 50.4	12.2	33.8
30		9 Sextantis	7	+ 5 42	41.5	3.0	9 46 24.8	46.7	8.2
31		ν Leonis	5.6	+13 12	32.5	54.5	9 50 17.0	39.4	1.3
32		1198 A. S. C.	6.7	+22 43	47.0	10.3	9 54 33.8	57.3	20.7
23		1202 A. S. C.	7	+16 32	55.0	17.4	9 57 40.1	2.7	25.2
34		α Leonis	1	+12 45	47.0	8.8	10 00 31.1	53.5	15.3
35		34 Leonis	7	+14 07	57.4	19.6	10 03 42 0	4.4	26.5
36		21 Sextantis	7	— 7 12	6.5	28.0	10 06 49.9	11.8	33.3
37		40 Leonis	6	+20 17	55.8	18.6	10 11 41.8	5.0	27.7
38		z Leonis	6	+ 7 21	34.5	56.2	10 15 18.3	40.3	1.8
39		27 Sextantis	6.7	— 3 35	38.5	0.1	10 19 22.0	43.8	5.3
40		u Sextantis	7	+ 2 58	12.0	33.5	10 22 55.2	17.0	38.5
41		Moon I	(11.0)	+ 6 46	45.3	7.5	10 26 30.0	52.4	14.8
42		ϕ^3 Hyd.& Crat.	5	—16 03	43.5	4.7	10 31 27.5	50.3	11.4
*43		35 Sextantis	6	+ 5 35	59.5	21.0	10 35 42.8	4.7	26.3
44		b^1 Hyd & Crat	6	—16 27	57.2	19.5	10 39 42.2	4.9	27.2
*45		r Sextantis	6	— 8 03	13.1	34.8	10 42 56.8	18.8	40.5
46		54 Leonis	5.6	+25 36	49.5	13.3	10 47 37.4	1.5	25.1
47		1299 A. S. C.	5	—36 17	3.3	29.8	10 49 56.7	23.5	50.0
48		d Leonis	5	+ 4 29	15.1	36.5	10 52 58.3	20.1	41.7
49		χ Leonis	4.5	+ 8 12	42.8	4.4	10 57 26.2	48.2	9.9
50	5	10 Hyd.& Crat	5	—27 13	57.9	21.9	11 01 46.3	10.7	34.8
51		δ Leonis	3	+21 24	36.1	59.2	11 06 22.3	45.5	8.7

April 1.--Clear. Adjustments examined. Since observing March 21, set back chronometer 1*m*.
2.--35 Sextantis double; the smaller star of the 7.8 magnitude. 54 Leonis double; the smaller star of the 7th magnitude.
5.--No error of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
6	52	57.44	— .837	+0	32.80	+0	32.70	+1.62	6	52	23.90	1
7	11	12.54	— .247		32.00		.73		7	10	39.56	2
7	31	33.50	— .441		32.83		.76		7	31	00.30	3
7	36	09.86	— .165		32.81		.76		7	35	36.94	4
8	36	14.04	— .291				.83		8	35	40.92	5
8	38	56.50	— .425		32.74		.83		8	38	23.25	6
8	43	42.62	— .157				.84		8	43	09.62	*7
8	47	50.02	— .366				.84		8	47	16.81	8
8	50	47.26	— .291				.84		8	50	14.13	9
8	54	01.92	— .212				.85		8	53	28.86	10
8	58	11.50	— .445				.85		8	57	38.21	11
9	00	48.30	— .242				.85		9	00	15.21	12
9	05	07.60	— .250				.86		9	04	34.49	13
9	09	23.38	— .564				.86		9	08	49.96	14
9	14	34.60	+3.929				.87		9	14	05.66	15
9	20	21.84	— .589		32.62		.88		9	19	48.37	16
9	24	27.90	— .507				.88		9	23	54.51	17
9	28	51.44	— .309				.89		9	28	18.24	18
9	32	38.90	— .350				.89		9	32	05.66	19
9	33	15.15	— .385				.89		9	32	41.88	20
9	37	24.82	— .218		32.94		.89		9	36	51.71	21
9	40	04.38	—2.166				.90		21	39	29.31	*22
9	50	15.56	— .356				.91		9	49	42.29	23
9	54	32.34	— .241				.91		9	53	59.19	24
9	57	38.72	— .318				.92		9	57	05.48	25
10	00	29.68	— .361	+0	32.74	+0	32.92	+1.62	9	59	56.40	26
9	33	16.50	— .077			+0	34.50	+1.72	9	32	41.92	27
9	37	26.22	— .046	+0	34.53		.50		9	36	51.67	28
9	42	50.40	— .087				.51		9	42	15.80	29
9	46	24.84	— .088				.51		9	45	50.24	30
9	50	16.94	— .071				.51		9	49	42.36	31
9	54	33.82	— .049				.52		9	53	59.35	32
9	57	40.08	— .069				.52		9	57	05.49	33
10	00	31.14	— .075	+0	34.51		.53		9	59	56.54	34
10	03	41.98	— .069				.53		10	03	07.38	35
10	06	49.90	— .116				.53		10	06	15.25	36
10	11	41.78	— .054				.54		10	11	07.19	37
10	15	18.22	— .084				.54		10	14	43.60	38
10	19	21.94	— .108				.55		10	18	47.28	39
10	22	55.24	— .094				.55		10	22	20.60	40
10	26	30.00	— .086				.55		10	25	55.36	41
10	31	27.48	— .142				.56		10	30	52.78	42
10	35	42.86	— .088				.57		10	35	08.20	*43
10	39	42.20	— .137				.57		10	39	07.49	44
10	42	56.80	— .118				.57		10	42	22.11	*45
10	47	37.36	— .043				.58		10	47	02.74	46
10	49	56.66	— .200				.58		10	49	21.88	47
10	52	58.34	— .091				.59		10	52	23.66	48
10	57	26.30	— .082			+0	34.59	+1.72	10	56	51.63	49
11	01	46.32	— .381			+0	40.66	+2.15	11	01	05.28	50
11	06	22.36	— .191	+0	40.48		.67		11	05	41.50	51

Nos. 7, 45. Two stars in the field of the instrument.
22, τ Cephei, sub-polo.
43, Three stars in the field.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	April 5 cont'd.	δ Hyd. & Crat.	3.4	—13°55′	22.7	44.7	11 12 07.1	29.6	51.5
2		λ Draconis	3.4	+70 12	32.5	35.8	11 22 40.0	44.3	47.6
3		ξ Hyd. & Crat.	4	—30 59	4.8	29.8	11 25 55.1	20.4	45.4
4		υ Leonis	4.5	+ 0 03	49.0	10.3	11 29 32.1	53.9	15.5
*5		γ Cephei	3	+76 45			11 33 29.7		
6		ζ Hyd. & Crat.	4	—17 28	40.9	3.1	11 37 26.0	48.9	11.3
7		β Leonis	2.3	+15 28	55.5	17.8	11 41 40.4	3.1	25.2
8		γ Ursæ Maj.	2	+54 35	56.6	33.6	11 46 11.3	49.0	26.0
9		1383 A. S. C.	7	+ 4 22	5.0	26.6	11 50 48.3	10.1	31.7
10		1 Comæ Ber.	6	+22 59	32.8	55.2	11 54 19.0	42.8	5.2
11		ο Virginis	4.5	+ 9 37	6.4	28.0	11 57 50.2	12.4	34.0
12		r Virginis	6	+ 2 47	33.0	54.3	12 02 16.0	37.8	59.4
13		t Virginis	6	+11 09	19.8	41.4	12 06 03.7	26.0	47.8
14		η Virginis	4	+ 0 13	46.8	8.2	12 12 29.9	51.6	13.0
15		*f* Comæ Ber.	5.6	+26 59	15.0	39.0	12 17 03.4	27.9	51.9
16		*u* Centauri	5	—38 09	45.5	12.7	12 20 40.4	8.1	35.4
17		*g* Comæ Ber.	5.6	+25 27	0.1	28.9	12 23 47.9	12.0	35.7
18		β Corvi	2.3	—22 31	59.9	23.0	12 26 46.5	10.1	33.3
19		1458 A. S. C.	6	+ 2 44	16.6	38.0	12 30 59.8	21.6	43.2
*20		γ^1 Virginis	3.4	— 0 35	37.0	58.4	12 34 20.2	42.0	3.4
21		33 Virginis	6	+10 26	17.8	39 5	12 39 01.7	23.9	45.8
22		30 Comæ Ber.	6	+28 25	27.2	51.6	12 42 16.4	41.3	5.4
*23		ε Ursæ Maj.	3	+56 49	27.0	6.5	12 47 46.1	25.9	5.3
24		37 Comæ Ber.	5	+31 39	33.0	58.0	12 53 23.6	49.3	14.4
25		k^4 Virginis	6.7	— 2 48	43.5	5.0	12 56 27.0	48.8	10.4
26		Moon I	(14.1)	—11 14	47.0	9.3	12 59 32.0	54.8	17.3
27		Moon II	(14.1)	—11 .14	59.3	21.7	13 01 44.5	7.3	29.7
28		53 Virginis	5.6	—15 20	35.4	57.6	13 04 28.2	42.8	5.0
29		57 Virginis	5.6	—19 06	21.8	44.5	13 08 07.5	30.6	53.2
30		ι Centauri	3	—35 52	31.5	58.0	13 12 25.0	52.0	18.5
31		α Virginis	1	—10 20	49.3	11.0	13 17 33.3	15.5	17.2
32	6	k^4 Virginis	6.7	— 2 48	45.8	7.3	12 56 29.0	50.9	12.5
33		53 Virginis	5.6	—15 20	37.6	0.0	13 04 22.4	44.9	7.3
34		57 Virginis	5.6	—19 06	24.0	46.6	13 08 09.6	32.7	55.3
35		ι Centauri	3	—35 52	33.8	0.3	13 12 27.1	54.0	20.5
36		α Virginis	1	—10 20	51.6	13.4	13 17 35.5	57.7	19.4
37		*h* Virginis	6	— 9 21	38.3	0.2	13 25 22.1	44.2	6.0
*38		*f* Hydræ con.	6.7	—25 41	58.4	22.1	13 28 46.2	10.3	34.1
*39		1 Bootis	6	+20 46	4.6	27.6	13 33 50.9	14.2	37.2
40		*i* Centauri	5	—32 14	35.7	1.0	13 37 26.6	52.5	17.9
41		*g* Centauri	5	—33 39	9.5	35.3	13 41 01.5	27.7	53.5
42		*h* Centauri	5	—31 08	0.4	25.5	13 44 51.0	16.5	41.5
43		η Bootis	3	+19 12	7.3	29.9	13 47 53.0	16.1	39.7
44		Moon II	(15.1)	—17 31	42.1	5.0	13 53 28.3	51.7	14.7
45		θ Centauri	2	—35 35	14.3	40.6	13 58 07.3	34.2	0.5
46		α Draconis	3.4	+65 08		1.0	14 00 52.9	45.0	33.4
47		κ Virginis	4	— 9 32	27.6	49.3	14 05 11.3	33.4	55.3
48		α Bootis	1	+20 01	24.8	47.6	14 09 10.7	33.9	56.6
49		λ Virginis	4	—12 38	32.8	54.6	14 11 17.0	39.4	1.2
50	14	8 Leonis	6.7	+17 09	36.2	58.6	9 28 21.5	44.4	6.8
51		ο Leonis	4	+10 37	1.2	23.0	9 32 45.1	7.3	29.1

April 5.—Transit *unilluminated*; power 180, without separating γ^1 and γ^2 Virginis.
6.—Clear.
14.—Perfectly clear; adjustments examined. Since preceding observations, set back the chronometer 1*m*.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
11	12	07.12	— .304	+0	40.46	+0	40.68	+2.15	11	11	26.14	1
11	22	40.04	+ .567				.69		11	21	59.92	2
11	25	55.10	— .405				.70		11	25	14.00	3
11	29	32.16	— .232				.70		11	28	51.23	4
11	33	29.70	—1.614		40.98		.71		23	32	47.38	*5
11	37	26.04	— .322				.71		11	36	45.01	6
11	41	40.40	— .152		40.76		.72		11	40	59.53	7
11	46	11.80	+ .172		40.66		.73		11	45	30.74	8
11	50	48.34	— .210				.73		11	50	07.40	9
11	54	19.00	— .110				.74		11	53	38.15	10
11	57	50.20	— .183				.75		11	57	09.27	11
12	02	16.10	— .219				.75		12	01	35.13	12
12	06	03.74	— .175				.76		12	05	22.81	13
12	12	29.90	— .231				.77		12	11	48.90	14
12	17	03.44	— .085				.78		12	16	22.58	15
12	20	40.42	— .458				.78		12	19	59.18	16
12	23	47.92	— .095				.78		12	23	07.05	17
12	26	46.56	— .351		40.72		.79		12	26	05.42	18
12	30	59.84	— .218				.79		12	30	18.83	19
12	34	20.20	— .235				.80		12	33	39.17	*20
12	39	01.74	— .179				.81		12	38	20.75	21
12	42	16.88	— .076				.81		12	41	35.49	22
12	47	46.16	+ .208				.82		12	47	05.55	*23
12	53	23.66	— .025				.82		12	52	42.82	24
12	56	26.94	— .247				.82		12	55	45.87	25
12	59	32.08	— .289				.83		12	58	50.96	26
13	01	44.50	— .289				.83		13	01	03.38	27
13	04	20.20	— .153				.84		13	03	39.21	28
13	08	07.52	— .332				.84		13	07	26.35	29
13	12	25.00	— .440				.85		13	11	43.71	30
13	17	33.26	— .285	+0	40.76	+0	40.86	+2.15	13	16	52.12	31
12	56	29.10	— .067			+0	43.13	+2.40	12	55	45.90	32
13	04	22.44	— .084				.14		13	03	39.22	33
13	08	09.62	— .090				.15		13	07	26.38	34
13	12	27.14	— .119				.15		13	11	43.87	35
13	17	35.52	— .077	+0	43.17		.16		13	16	52.28	36
13	25	22.16	— .075				.17		13	24	38.92	37
13	28	46.22	— .100				.18		13	28	02 94	*38
13	33	50.90	— .033				.19		13	33	07.68	*39
13	37	26.74	— .112				.19		13	36	43.44	40
13	41	01.50	— .114				.20		13	40	18.19	41
13	44	50.98	— .093				.21		13	44	07.68	42
13	47	53.00	— .039		43.24		.21		13	47	09.75	43
13	53	28.36	— .087				.22		13	52	45.05	44
13	58	07.38	— .118				.23		13	57	24.03	45
14	00	52.96	— .105				.24		14	00	09.62	46
14	05	11.38	— .076				.24		14	04	28.06	47
14	09	10.72	— .034	+0	43.21		.25		14	08	27.44	48
14	11	17.00	— .080			+0	43.25	+2.40	14	10	33.67	49
9	28	21.50	— .039			+0	03.25	+2.20	9	28	18.21	50
9	32	45.14	— .048				.25		9	32	41.84	51

No. 5. γ Cephei, sub-polo.
23. Recorded 12*h*. 48*m*. at transit over middle wire.
38. *f* Hydræ con. double; the smaller star of the 7th magnitude.
39. Two stars in the field of the instrument.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 14 cont'd.	ε Leonis	3	+24°30′	7.2	30.5	9 36 54.6	18.7	42.3
2		θ Sextantis	6.7	+ 5 05	35.6	57.0	9 42 19.0	41.0	2.4
3		9 Sextantis	7	+ 5 42	9.9	31.6	9 45 53.5	15.5	37.0
4		ν Leonis	5.6	+13 12	1.2	23.2	9 49 45.6	8.0	30.1
5		1198 A. S. C.	6.7	+22 48	15.5	38.8	9 54 02.4	26.0	49.2
6		1202 A. S. C.	7	+16 32	23.6	46.0	9 57 08.8	31.5	53.6
7		α Leonis	1	+12 45	15.4	37.4	9 59 59.7	22.1	44.1
8		34 Leonis	7	+14 07	26.0	48.0	10 03 10.5	33.0	55.2
9		21 Sextantis	7	— 7 12	35.0	56.6	10 06 18.5	40.5	2.2
10		40 Leonis	6	+20 17	24.4	47.0	10 11 10.2	33.5	56.2
11		z Leonis	6.7	+ 7 21	3.3	25.0	10 14 46.8	8.5	30.3
12		27 Sextantis	6.7	— 3 35	7.3	28.8	10 18 50.5	12.5	34.0
13		u Sextantis	7	+ 2 58	40.5	2.0	10 22 23.8	45.6	7.2
14		48 Leonis	6	+ 7 46	52.2	14.0	10 26 36.0	58.0	19.8
15		ϕ^3 Hyd.& Crat.	5	—16 03	11.1	33.3	10 30 56.0	18.8	41.0
*16		35 Sextantis	6.7	+ 5 35	28.0	49.5	10 35 11.3	33.0	54.5
17		b^1 Hyd.& Crat	6	—16 27	25.6	48.0	10 39 10.7	33.4	55.8
*18		r Sextantis	6	— 8 03	41.8	3.4	10 42 25.4	47.5	8.9
*19		54 Leonis	5.6	+25 36	18.1	41.8	10 47 06.0	30.3	53.8
20		1299 A. S. C.	5	—36 17	31.5	58.0	10 49 25.0	52.0	18.5
*21		d Leonis	5	+ 4 28	43.5	5.0	10 52 26.8	48.6	10.3
22		χ Leonis	4.5	+ 8 12	11.2	32.8	10 56 54.8	16.8	38.4
23		10 Hyd & Crat.	6	—27 13	20.0	44.2	11 01 08.7	33.2	57.3
24		δ Leonis	3	+21 24	58.5	21.5	11 05 44.9	8.3	31.4
25		δ Hyd.& Crat.	3.4	—13 55	45.0	7.2	11 11 29.7	52.1	14.3
26	15	1202 A. S. C.	7	+16 32	26.0	48.2	9 57 10.9	33.5	55.7
27		α Leonis	1	+12 45	17.5	39.5	10 00 01.8	24.2	46.2
28		34 Leonis	6	+14 07	28.1	50˚.4	10 03 12.8	35.2	57.2
29		21 Sextantis	7	— 7 12	37.2	59.0	10 06 20.8	42.7	4.4
30		40 Leonis	6	+20 17	26.5	49.4	10 11 12.7	36.0	58.7
31		z Leonis	6.7	+ 7 21	5.5	27.2	10 14 49.0	11.0	32.8
32		27 Sextantis	6.7	— 3 35	9.5	31.0	10 18 52.8	14.5	36.0
33		u Sextantis	7	+ 2 58	42.6	4.2	10 22 26.0	47.9	9.3
34		48 Leonis	6	+ 7 46	54.5	16.2	10 26 38.1	0.0	21.7
35		ϕ^3 Hyd.& Crat.	5	—16 03	13.2	35.5	10 30 58.1	20.7	43.1
*36		35 Sextantis	6.7	+ 5 35	30.0	51.6	10 35 13.5	35.4	57.0
37		b^1 Hyd.& Crat.	6	—16 27	27.6	50.0	10 39 12.6	35.3	57.7
*38		r Sextantis	6	— 8 03	44.0	5.5	10 42 27.5	49.5	11.2
*39		54 Leonis	5.6	+25 36	20.3	44.0	10 47 08.2	32.3	56.0
40		1299 A. S. C.	5	—36 17	33.7	0.2	10 49 27.2	54.3	21.0
*41		d Leonis	5	+ 4 28	45.5	7.2	10 52 29.0	50.8	12.3
42		χ Leonis	4.5	+ 8 12	13.2	34.9	10 56 56.9	18 9	40.5
43		10 Hyd.& Crat.	6	—27 13	22,2	46.5	11 01 10.9	35.4	59.5
44		δ Leonis	3	+21 24	0.7	23.8	11 05 47.1	10.5	33.6
45		δ Hyd.& Crat.	3.4	—13 55	47.3	9.2	11 11 31.8	54.4	16.4
*46	19	α Leonis	1	+12 45	27.2	49.0	10 00 11.3	33.6	55.4
47		19 Sextantis	7	+ 5 24	6.0	27.5	10 04 49.2	11.0	32.6
48		1220 A. S. C.	7	+18 32	8.0	30.7	10 07 53.6	16.5	39.2
49		γ Leonis	2	+20 39	43.5	6.2	10 11 29.5	52.8	15.6
50		r Arg. in vel.	4.5	—40 51	51.3	20.0	10 15 48.4	16.9	46.0
51		α Antl. Pneum.	4.5	—30 16	20.5	45.1	10 20 10.7	36.2	0.8

April 15.—Perfectly clear; 54 Leonis is recorded 10*h*. 46*m*. at transit over middle wire.
19.—Clear; no error of level; collimation +0*s*.44.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
9	36	54.66	— .027	+0	03.33	+0	03.26	+2.20	9	36	51.37	1
9	42	19.00	— .056				.27		9	42	15.67	2
9	45	53.50	— .055				.27		9	45	50.18	3
9	49	45.62	— .044				.28		9	49	42.30	4
9	54	02.88	— .029				.28		9	53	59.07	5
9	57	08.74	— .040				.29		9	57	05.41	6
9	59	59.74	— .045		03.25		.29		9	59	56.41	7
10	03	10.54	— .043				.30		10	03	07.20	8
10	06	18.56	— .073				.30		10	06	15.19	9
10	11	10.26	— .034				.31		10	11	06.92	10
10	14	46.78	— .053				.31		10	14	43.42	11
10	18	50.62	— .067				.32		10	18	47.23	12
10	22	23.82	— .059				.33		10	22	20.43	13
10	26	36.00	— .052				.33		10	26	32.62	14
10	30	56.04	— .085				.34		10	30	52.62	15
10	35	11.32	— .055				.35		10	35	07.92	*16
10	39	10.70	— .086				.35		10	39	07.26	17
10	42	25.40	— .074				.36		10	42	21.97	*18
10	47	06.00	— .026				.37		10	47	02.60	*19
10	49	25 00	— .120				.37		10	49	21.51	20
10	52	26.84	— .057				.37		10	52	23.41	*21
10	56	54.80	— .051				.38		10	56	51.37	22
11	01	08.68	— .103				.39		11	01	05.19	23
11	05	44.92	— .032		03.46		.39		11	05	41.50	24
11	11	29.66	— .082	+0	03.26	+0	03 40	+2.20	11	11	26.18	25
9	57	10.86	— .040			+0	05.35	+2.25	9	57	05.47	26
10	00	01.84	— .045	+0	05.37		.35		9	59	56.45	27
10	03	12 74	— .043				.36		10	03	07.34	28
10	06	20.82	— .073				.36		10	06	15.39	29
10	11	12.66	— .034				.37		10	11	07.26	30
10	14	49.10	— .053				.37		10	14	43.68	31
10	18	52.76	— .067				.38		10	18	47.31	32
10	22	26.00	— .059				.39		10	22	20.55	33
10	26	38.10	— .052				.39		10	26	32.66	34
10	30	58.12	— .085				.40		10	30	52.64	35
10	35	13.50	— .055				.41		10	35	08.04	*36
10	39	12.64	— .086				.41		10	39	07.14	37
10	42	27.54	— .074				.42		10	42	22.05	*38
10	47	08.16	— .026				.43		10	47	02.70	*39
10	49	27.28	— .120				.43		10	49	21.73	40
10	52	28.96	— .057				.43		10	52	23.47	*41
10	56	56.88	— .051				.44		10	56	51.39	42
11	01	10.90	— .103				.45		11	01	05.35	43
11	05	47.14	— .032		05.68		.45		11	05	41 66	44
11	11	31.82	— .082	+0	05.23	+0	05.46	+2.25	11	11	26.28	45
10	00	11.30	+ .161	+0	15.07	+0	15.23	+2.68	9	59	56.23	*46
10	04	49.26	+ .101				.24		10	04	34.12	47
10	07	53.60	+ .229				.24		10	07	38.59	48
10	11	29.52	+ .263				.25		10	11	14.53	49
10	15	48.52	— .263				.26		10	15	33.00	50
10	20	10.66	— .193			+0	15.27	+2.68	10	19	55.20	51

Nos. 16, 36. 35 Sextantis double; the smaller star of the 8th magnitude.
19, 39. 54 Leonis double; the smaller star of the 7th magnitude.
16, 18, 21, 36, 38, 41, 46. Two stars in the field of the transit.

No. for ref.	Month. and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 19 cont'd.	x Sextantis	7	+ 5°28′	37.0	58.5	10 24 20.3	42.3	3 8
2		1 Hyd.& Crat.	6	—15 31	4.0	26.0	10 28 48.7	11.2	33.4
3		1266 A. S. C.	5	+69 54		50.4	10 31 53.5	57.5	
4		m Leonis Min.	5.6	+24 01	16.0	39.5	10 35 03.2	27.0	50.6
5		o^1 Sextantis	6.7	+ 7 13	22.9	44.5	10 38 06.5	28.5	50 0
6		ν Hyd.& Crat.	4	—15 22	20.0	42.0	10 42 04.5	27.2	49.3
7		b^3 Hyd.& Crat.	5 6	—19 17	15.0	37.8	10 46 01.0	24.0	46.8
8		57 Leonis	7	+ 1 17	35.5	57.2	10 48 18.9	40.6	2.3
*9		α Ursæ Maj.	2	+62 36	36.0	22.6	10 54 10.2	57.7	44.4
*10		χ^1 Hyd.& Crat	5	—26 ·26	10.5	34.5	10 57 58.7	23.0	47.1
11		p^3 Leonis	7	— 0 28	41.2	2.7	11 01 24.5	46.3	7.8
12		δ Leonis	3	+21 24	10.1	33.1	11 05 56.5	19.9	42.9
13		δ Hyd.& Crat.	3.4	—13 55	57.2	19.4	11 11 41.7	4.0	26.2
14		λ Hyd.& Crat.	6	—17 54	2.0	24.3	11 15 47.4	10.6	32.7
*15		κ Hyd.& Crat.	6	—11 29	43.2	5.0	11 19 27.2	49.5	11.3
16		e Leonis	5	— 2 08	46.5	7.9	11 22 29.6	51.4	12.8
17		H Leonis	6	+ 3 57	48.5	10.0	11 26 31.7	53.5	15.0
*18		γ Cephei	3	+76 45	56.0	32.8	11 33 08.0	43.3	
19		ξ^1 Virginis	5.6	+ 9 09	39.2	1.0	11 37 22.9	45.0	6.4
20		β Leonis	2.3	+15 28	29.8	52.0	11 41 14.5	37.0	59.3
21		γ Ursæ Maj.	2	+54 35	30 1	7.0	11 45 44.7	22.3	59.3
22	21	x Sextantis	7	+ 5 28	43.2	4.7	19 24 26.5	48.4	10.0
23		1 Hyd.& Crat	6	—15 31	10.0	32.2	10 28 54.9	17.5	39.7
24		1266 A. S. C.	5	+69 54	53.0	56.0	10 31 59.4	2.9	5.8
25		m Leonis Min.	5.6	+24 01	22.5	46.0	10 35 09.6	33.1	56.6
26		o^1 Sextantis	6.7	+ 7 13	29.0	50.6	10 38 12.5	34.5	56.1
27		ν Hyd.& Crat.	3.4	—15 22	26.3	48.5	10 42 11.0	33.5	55.7
28		57 Leonis	7	+ 1 17	42 0	3.3	10 48 25.1	47.0	8.3
*29		α Ursæ Maj.	2	+62 36	42.0	29.0	10 54 16.5	4.0	51.0
*30		χ^1 Hyd.& Crat.	6	—26 26	16.7	40.7	10 58 05.0	29.3	53.3
31		p^3 Leonis	7	— 0 28	47.2	8.8	11 01 30.5	52.5	13.8
32		δ Leonis	3	+21 24	16.6	39.5	11 06 02.9	26.3	49.3
33		δ Hyd.& Crat.	3.4	—13 55	3.5	25.5	11 11 48.0	10.5	32.5
34		λ Hyd.& Crat.	6	—17 54	8.0	30.2	11 15 53.2	16.2	39.0
35	24	α Canis Min.	1.2	+ 5 38	45.0	6.6	7 31 28.5	50.4	12.0
36		β Geminorum	2	+28 24	15.9	40.8	7 36 05.0	29.8	54.0
37	25	α Canis Maj.	1	—16 30	55.8	18.3	6 38 40.9	3.5	26.0
38		ϵ Canis Maj.	2.3	—28 45	6.0	30.5	6 52 55.2	20.0	44.5
39		β Geminorum	2	+28 24	18.8	43.1	7 36 07.8	32.5	56.8
40		15 Argus	3.4	—23 51	32.2	55.6	8 01 19.3	43.0	6.4
*41		α Ursæ Maj.	2	+62 36	53.0	39.5	10 54 27.0	14.5	1.0
42		χ^1 Hyd.& Crat.	5.6	—26 26	27.0	51.1	10 58 15.3	39.5	3.7
43		χ^2 Hyd.& Crat.	6.7	—26 26			10 58 50.0	14.2	38.1
44		p^3 Leonis	7	— 0 28	57.5	19.0	11 01 41.0	3.0	24.5
45		δ Leonis	3	+21 24	27.0	50.0	11 06 13.2	36.6	59.6
46		δ Hyd & Crat.	3.4	—13 55	13.7	35.7	11 11 58.1	20.6	42.6
47		λ Hyd.& Crat.	6	—17 54	18.5	40.8	11 16 03.7	26.5	49.0
48		κ Hyd. & Crat.	6	—11 29	59.7	21.5	11 19 43.7	6.0	27.8
49		e Leonis	4.5	— 2 08	2.8	24.2	11 22 46.0	7.8	29.4
50		H Leonis	6.7	+ 3 57	4.9	26.4	11 26 48.2	10.2	31.8

April 19.—α Ursæ Maj. is preceded by a star of 7.8 magnitude and dec. +62°.32.
21, 25.—Corrected the error of collimation on the 21st, and re examined the adjustments on the 25th.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
10	24	20.38	+ .083			+0	15.27	+2.68	10	24	05.19	1
10	28	48.66	— .092				.28		10	28	33.29	2
10	31	53.80	+2.129				.29		10	31	40.64	3
10	35	03.26	+ .300				.29		10	34	48.27	4
10	38	06.48	+ .101				.30		10	37	51.28	5
10	42	04.60	— .090				.31		10	41	49.20	6
10	46	00.92	— .123				.31		10	45	45.49	7
10	48	18.90	+ .044				.32		10	48	03.62	8
10	54	10.18	+1.524	+0	15.42		.33		10	53	56.37	*9
10	57	58.76	— .170				.33		10	57	43.26	*10
11	01	24.50	+ .028				.34		11	01	09.19	11
11	05	56.50	+ .262		15.36		.34		11	05	41.42	12
11	11	41.70	— .081		15.33		.35		11	11	26.27	13
11	15	47.40	— .214				.35		11	15	31.84	14
11	19	27.24	— .062				.36		11	19	11.82	*15
11	22	29.64	+ .013				.37		11	22	14.28	16
11	26	31.74	+ .068				.37		11	26	16.44	17
11	33	07.72	—4.496		15.27		.38		23	32	47.84	*18
11	37	22.90	+ .109				.39		11	37	07.62	19
11	41	14.52	+ .188		15.17		.40		11	40	59.31	20
11	45	44.68	+1.061	+0	15.42	+0	15.40	+2.68	11	45	30.34	21
10	24	26.56	— .475			+0	21.06	+2.70	10	24	05.03	22
10	28	54.86	— .725				.06		10	28	33.08	23
10	31	59.44	+1.124				.07		10	31	39.49	24
10	35	09.56	— .242				.08		10	34	48 24	25
10	38	12.54	— .455				.08		10	37	51.01	26
10	42	11.00	— .724				.09		10	41	49.19	27
10	48	25.54	— .525				.10		10	48	03.92	28
10	54	16.50	+ .751	+0	21.03		.11		19	53	56.14	*29
10	58	05.00	— .874				.12		10	57	43.01	*30
11	01	30.50	— .545				.12		11	01	08.84	31
11	06	02.92	— .288		21.25		.13		11	05	41.50	32
11	11	48.00	— .706	+0	21.03		.14		11	11	26.15	33
11	15	53.32	— .756			+0	21.15	+2.70	11	15	31.41	34
7	31	28.50	+ .184	+0	28.81	+0	28.45	+2.56	7	31	00.23	35
7	36	05.00	— .064	+0	28.44	+0	28.45	+2.56	7	35	36.49	36
6	38	40.90	— .643	+0	30.93	+0	30.94	+2.61	6	38	09.32	37
6	52	55.24	— .792		31.12		.97		6	52	23.48	38
7	36	07.80	— .154		31.18		31.03		7	35	36.62	39
8	01	19.30	— .727		30.76		.10		8	00	47.47	40
10	54	27.00	+ .655		31.54		.42		10	53	56.23	*41
10	58	15.32	— .762				.43		10	57	43.13	42
10	58	49.92	— .762				.43		10	58	17.73	43
11	01	41.00	— .475				.43		11	01	09.10	44
11	06	13.28	— .241		31.70		.44		11	05	41.60	45
11	11	58.14	— .639	+0	31.36		.45		11	11	26.05	46
11	16	03.70	— .659				.45		11	15	31.59	47
11	19	43.74	— .589				.46		11	19	11.69	48
11	22	46.04	— .493				.46		11	22	14.09	49
11	26	48.30	— .430			+0	31.47	+2.61	11	26	16.40	50

Nos. 9, 15, 29. Two stars in the field of the instrument.
9, 29, 41. α Ursæ Majoris is preceded by a small star of the 7th mag, having about 6′ less declination; 21s.90, 22s.37 and 22s.15, respectively.
10, 30. χ^1 Hyd. & Crat. is followed by a star of the 6.7 mag. 34s.74. Their declinations are the same.
18. γ Cephei, sub-polo.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	April 25	γ Cephei	3	+76°45′	10.5	47.5	11 33 22.9	57.5	35.0
2	cont'd.	ξ^1 Virginis	5.6	+ 9 09	55.8	17.2	11 37 39.3	1.5	23.1
3		β Leonis	2.3	+15 28	46.2	8.6	11 41 31.2	53.8	16.2
4		γ Ursæ Maj.	2	+54 35		22.4	11 46 00.5	38.6	
5	27	α Canis Min.	1.2	+ 5 38	53.4	15.0	7 31 36.8	58.7	20.3
6		β Geminorum	2	+28 24	24.1	48.5	7 36 13.2	38.0	2.3
7		Moon I	(6.1)	+20 28	58.0	21.4	8 17 45.2	9.1	32.4
8		δ Hydræ	4.5	+ 6 15	9.5	31.0	8 29 52.9	14.8	36.2
9		ε Hydræ	4	+ 7 00	16.5	38.0	8 38 59.9	21.8	43.4
10	28	ε Hydræ	4	+ 7 00	17.5	39.0	8 39 00.9	22.8	44.4
11		ζ Hydræ	4	+ 6 33	55.6	17.1	8 47 39.0	0.9	22.4
12		Moon I	(7.4)	+15 12	43.5	6.3	9 15 29.4	52.6	15.4
13		α Hydræ	2	— 7 58	43 0	4.4	9 20 26.4	48.4	9.9
14		ξ Leonis	5	+12 00	18.3	40.0	9 24 02.3	24.6	46.3
*15		β Cephei	3	+69 51		10.2	9 27 13.5	16.6	
16		ο Leonis	4	+10 37	36.0	37.7	9 33 19.8	42.0	3.7
17		ε Leonis	3	+24 30	42.0	5.3	9 37 29.4	53.5	16.8
18		υ Ursæ Maj.	4.5	+59 47		35.0	9 40 18.2	1.5	
19		μ Leonis	3	+26 45	34.5	58.4	9 44 22.7	47.0	11.0
20	May 1	b^3 Hyd. & Crat.	5.6	—19 17	43.6	6.0	10 46 28.9	51.9	14.7
21		57 Leonis	7	+ 1 17	3.7	25.2	10 48 47.0	8.8	30.3
22		α Ursæ Maj.	2	+62 36	3.6	50.5	10 54 37.8	25.4	12.3
23		p^2 Leonis	5.6	+ 2 49	50.2	11.5	10 59 33.2	55.0	16.6
24		δ Leonis	3	+21 24	38.0	1.2	11 06 24.6	48.0	10.7
25		γ Ursæ Maj.	2	+54 35			11 46 12.7		
26		Moon I	(10.5)	— 3 34			11 50 32.5	54.8	16.8
27		1 Comæ Ber.	6.7	+22 59			11 54 21.2	45.0	8.3
28		ο Virginis	4.5	+ 9 37	8.8	30.4	11 57 52.5	14.6	36.3
29		r Virginis	6	+ 2 47	35.5	56.8	12 02 18.5	40.4	1.8
30		t Virginis	6	+11 09	22.2	44.0	12 06 06.1	28.2	50.0
31		h Comæ Ber.	5	+24 50	16.0	39.7	12 09 03.7	27.8	51.5
32		η Virginis	3.4	+ 0 13	49.2	10.7	12 12 32.5	54.4	15.8
*33		ι Corvi	5.6	—23 57	4.2	27.8	12 15 51.5	15.5	38.8
34		1432 A. S. C.	6.7	— 3 44	45.2	6.8	12 20 28.6	50.4	11.9
35		19 Virginis	7	+10 36	31.3	53.0	12 23 15.4		
36		β Corvi	2.3	—22 31	2.5	25.7	12 26 49.2	12.8	36.1
37	2	1 Comæ Ber.	6.7	+22 59	35.7	58.9	11 54 22.5	46.2	9.4
38		ο Virginis	4.5	+ 9 37	10.1	31.8	11 57 53.8	15.8	37.8
39		r Virginis	6	+ 2 47	36.5	58.0	12 02 19.9	41.8	3.3
40		t Virginis	6	+11 09	23 5	45.2	12 06 07.5	29.8	51.4
41		h Comæ Ber.	5	+24 50	17.2	41.0	12 09 05.1	29.0	52.4
42		η Virginis	3.4	+ 0 13	50.6	12.0	12 12 33.8	55.6	17.3
*43		ι Corvi	5.6	—23 57	5.5	29.0	12 15 52.8	16.6	40.2
44		1432 A S. C.	6.7	—12 31	46.5	8.0	12 20 29.9	51.7	13.3
45		19 Virginis	7	+10 36	32.6	54.4	12 23 16.5	38.6	0.4
46		β Corvi	2.3	—22 31	3.8	27.0	12 26 50.5	14.0	37.1
47		1458 A. S. C.	6.7	+ 2 44	20.2	41.8	12 31 03.5	25.4	46.9
48		d^1 Virginis	6	+ 7 11	58.0	19 4	12 34 41.2	3.1	24.6
49		Moon I	(11.5)	— 9 44	24.8	46.8	12 40 09.5	32.2	54.2

April 27.--No error of level or azimuth ; collimation — 0s.40.
28.--Passing clouds ; collimation and level adjusted.
May 1.--Passing clouds ; no error of level or collimation.
2.--Perfectly clear ; adjustments of collimation and level as yesterday.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
11	33	22.68	—2.949	+0	31.37	+0	31.48	+2.61	23	33	48.25	*1
11	37	39.38	— .377				.49		11	37	07.61	2
11	41	31.20	— .309		31.41		.49		11	40	59.40	3
11	46	00.50	+ .399	+0	30.68	+0	31.50	+2.61	11	45	29.40	4
7	31	36.84	— .401	+0	36.61	+0	36.48	+1.43	7	30	59.96	5
7	36	13.22	— .454		36.33		.48		7	35	36.29	6
8	17	45.22	— .427				.52		8	17	08.27	7
8	29	52.88	— .402				.53		8	29	15.95	8
8	38	59.92	— .403	+0	36.55	+0	36.54	+1.43	8	38	22.98	9
8	39	00.92	— .282	+0	37.68	+0	37.77	+1.49	8	38	22.87	10
8	47	39.00	— .286				.78		8	47	00.93	11
9	15	29.44	— .221				.80		9	14	51.42	12
9	20	26.42	— .390		37.76		.81		9	19	48.22	13
9	24	02.30	— .245				.81		9	23	24.25	14
9	27	13.43	—1.457	+0	38.00		.81		21	26	34.16	*15
9	33	19.84	— .255				.82		9	32	41.77	16
9	37	29.40	— .144	+0	37.97		.82		9	36	51.44	17
9	40	18.23	+ .384				.83		9	39	40.78	18
9	44	22.72	— .124			+0	37.83	+1.49	9	43	44.77	19
10	46	28.90	— .765			+0	42.91	+1.55	10	45	45.23	20
10	48	47.00	— .479				.91		10	48	03.61	21
10	54	37.92	+ .743	+0	42.74		.92		10	53	55.74	22
10	59	33.30	— .501				.93		10	58	49.87	23
11	06	24.50	— .274		42.95		.93		11	05	41.30	24
11	46	12.70	+ .396		42.98		.96		11	45	30.14	25
11	50	32.53	— .574				.97		11	49	48.99	26
11	54	21.19	— .252				.97		11	53	37.97	27
11	57	52.52	— .422				.98		11	57	09.12	28
12	02	18.60	— .502				.99		12	01	35.11	29
12	06	06.10	— .402				.99		12	05	22.71	30
12	09	03.74	— .228				.99		12	08	20.52	31
12	12	32.52	— .530				43.00		12	11	48.99	32
12	15	51.56	— .828				.00		12	15	07.73	*33
12	20	28.58	— .577				.01		12	19	44.99	34
12	23	15.33	— .409				.01		12	22	31.91	35
12	26	49.26	— .807	+0	42.96	+0	43.01	+1.55	12	26	05.44	36
11	54	22.54	— .148			+0	44.49	+1.43	11	53	37.90	37
11	57	53.86	— .248				.49		11	57	09.12	38
12	02	19.90	— .296				.49		12	01	35.11	39
12	06	07.48	— .237				.50		12	05	22.74	40
12	09	05.14	— .134				.50		12	08	20.51	41
12	12	33.86	— .312				.50		12	11	49.05	42
12	15	52.82	— .487				.51		12	15	07.82	*43
12	20	29.88	— .400				.51		12	19	44.97	44
12	23	16.50	— .240				.52		12	22	31.74	45
12	26	50.48	— .475	+0	44.52		.52		12	26	05.49	46
12	31	03.56	— .295				.53		12	30	18.74	47
12	34	41.26	— .265				.53		12	33	56.47	48
12	40	09.50	— .380			+0	44.53	+1.43	12	39	24.59	49

Nos. 1, 15. γ and β Cephei, sub-polo.

33. ε Corvi is preceded by a star of the 6th magnitude 20s.5; its declination is —21°.00 nearly.

43. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 2	1480 A. S. C.	7	— 9°28′	11.0	32.5	12 43 54.5	16.5	38.2
2	cont'd.	ψ Virginis	5.6	— 8 40	9.6	31.2	12 46 53.2	15.2	37.0
3		r Comæ Ber.	5	+18 16	5.9	28.2	12 51 51.2	14.0	36.7
4		ε Virginis	3.4	+11 49	19.5	41.2	12 55 03.6	26.0	47.7
5		40 Comæ Ber.	6	+23 28	38.8	2.0	12 59 25.8	49.7	13.0
6		θ Virginis	4.5	— 4 41	48.0	9.3	13 02 31.2	53.0	14.7
7	3	1458 A. S. C.	7	+ 2 44	22.0	43.5	12 31 04.5	27.0	48.3
8		d¹ Virginis	6	+ 7 11	0.5	21.0	12 34 42.0	4.5	25.3
9		θ Virginis	4.5	— 4 41	49.0	10.0	13 02 32.5	54.0	17.2
10		55 Virginis	6	—19 06	44.5	7.0	13 06 30.5	53.5	16.1
11		σ Virginis	6	+ 6 19	40.0	2.0	13 10 24.0	46.0	58.0
12		u Virginis	7	+ 5 59	14.0	36.0	13 14 57.0	19.5	41.4
13		w Virginis	5.6	+14 38	43.5	5.5	13 21 28.5	50.5	12.7
14		75 Virginis	6	—14 32	29.0	50.5	13 25 11.5	36.0	55.2
15		Moon I	(12.5)	—14 39	52.0	14.5	13 30 37.0	0.5	23.6
16		85 Virginis	6	—14 58	6.0	28.0	13 37 50.0	12.5	35.6
17		x Virginis	5.6	—17 20	18.0	40.5	13 42 03.5	26.0	48.2
18		η Bootis	3	+19 12	9.5	33.5	13 47 56.0	19.0	41.2
19	4	h Centauri	5	—31 08	7.0	32.0	13 44 57.5	23.0	48.5
20		α Bootis	1	+20 01	31.0	54.0	14 09 17.0	41.0	2.2
*21		1636 A. S. C.	5.6	+ 6 33	26.0	47.5	14 17 09.0	31.0	52.8
22		Moon I	(13.6)	—19 28	56.0	20.0	14 22 43.5	7.5	30.5
*23		ρ Bootis	4	+31 04			14 25 51.0		
24		ζ Bootis	3.4	+14 25			14 35 26.0		
25		ο Bootis	4.5	+17 38	56.5	19.0	14 38 42.0	5.0	27.7
*26		α² Libræ	3	—15 23	13.5	35.5	14 42 58.0	20.5	43.2
*27		ξ¹ Libræ	6	—11 15	54.0	15.5	14 46 38.0	1.0	22.2
28		17 Libræ	7	—10 31		7.5	14 50 29.5	52.0	
29	6	9 Serpentis	5.6	+16 00	38.7	1.0	15 19 23.6	46.2	8.5
30		1758 A. S. C.	6	—19 07	42.7	5.5	15 24 28.6	51.7	14.4
31		α Cor. Bor.	2	+27 15	7.2	31.3	15 28 55.7	20.2	44.2
32		κ Libræ	5	—19 09	1.2	23.6	15 33 46.6	9.8	32.4
33		α Serpentis	2.3	+ 6 56	41.6	3.0	15 37 25.0	47.0	8.6
34		b Scorpii	5	—25 16	37.4	1.0	15 42 25.0	49.0	12.7
*35		A¹ Scorpii	5	—24 51	16.3	40.0	15 45 04.0	28.0	51.6
36		π Scorpii	3.4	—25 39	26.1	49.9	15 50 14.1	38.3	2.1
37		3 Herculis	6	+ 4 53	13.2	34.7	15 53 56.5	18.4	40.0
*38		β¹ Scorpii	2	—19 22	24.5	48.2	15 57 11.1	34.6	57.2
39		m Scorpii	6	—25 53	38.2	2.0	15 59 26.3	50.6	14.2
40		c¹ Scorpii	6.7	—28 00	37.6	2.0	16 03 26.6	51.3	15.4
41		δ Ophiuchi	3	— 3 17	16.9	38.2	16 07 00.0	21.9	43.3
42		σ Scorpii	4	—25 12	43.5	7.3	16 12 31.5	55.6	19.2
43		Moon II	(15.7)	—26 51	53.0	17.6	16 14 42.6	7.5	32.0
44		α Scorpii	1	—26 04	51.1	15.2	16 20 39.5	3.6	27.6
*45		η Draconis	3	+61 [illegible]		2.1	16 22 48.5	35.0	
*46	8	α Herculis	3.4	+14 35	42.0	4.0	17 08 26.5	49.0	11.0
*47		θ Ophiuchi	3.4	—24 50	31.0	54.6	17 13 18.5	42.5	6.1
*48		b Ophiuchi	5	—24 01	56.1	19.5	17 17 43.2	7.0	30.6
49		2004 A. S. C.	6	+ 0 28	3.0	24.5	17 21 46.2	7.8	29.4

May 3 and 4.—The observations were made by Lieutenant W. H. Ball.
6.—Clear. Examined the instrumental adjustments. There was no error of level; collimation, +0s.50.
8.—Clear.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.	Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate	Apparent AR from observation.	No. for ref.
h. m. s.	*s.*	*m. s.*	*m. s.*	*s.*	*h. m. s.*	
12 43 54.54	— .379		+0 44.54	+1.43	12 43 09.62	1
12 46 53.24	— .373		.54		12 46 08.33	2
12 51 51.20	— .185		.54		12 51 06.48	3
12 55 03.60	— .232		.55		12 54 18.82	4
12 59 25.86	— .144		.55		12 58 41.17	5
13 02 31.24	— .345		+0 44.56	+1.43	13 01 46.34	6
12 31 05.06	— .197		+0 45.84	+2.20	12 30 19.02	7
12 34 42.66	— .175		.84		12 33 56.65	8
13 02 32.74	— .234		.88		13 01 46.63	9
13 06 30.32	— .299		.89		13 05 44.13	10
13 10 24.00	— .178		.89		13 09 37.93	11
13 14 57.58	— .180		.90		13 14 11.50	12
13 21 28.14	— .142		.91		13 20 42.09	13
13 25 11.44	— .273		.92		13 24 25.25	14
13 30 37.52	— .273		.92		13 29 51.33	15
13 37 50.42	— .273		.94		13 37 04.21	16
13 42 03.24	— .290		.95		13 41 17.00	17
13 47 55.84	— .109	+0 46.08	+0 45.95	+2.20	13 47 09.78	18
13 44 57.60	— .366		+0 49.04	+3.12	13 44 08.19	19
14 09 17.04	— .115	+0 49.22	.09		14 08 27.84	20
14 17 08.86	— .178		.11		14 16 19.57	*21
14 22 43.50	— .298		.12		14 21 54.08	22
14 25 51.00	— .053		.13		14 25 01.82	*23
14 35 26.00	— .141		.15		14 34 36.71	24
14 38 42.04	— .125	+0 49.05	.17		14 37 52.75	25
14 42 58.14	— .281		.17		14 42 08.69	*26
14 46 38.14	— .258		.18		14 45 48.70	*27
14 50 29.50	— .255		+0 49.19	+3.12	14 49 40.06	28
15 19 23.60	+ .265		+0 55.76	+2.49	15 18 28.10	29
15 24 28.58	— .036		.77		15 23 32.77	30
15 28 55.72	+ .420	+0 55.73	.77		15 28 00.37	31
15 33 46.72	— .036		.78		15 32 50.90	32
15 37 25.04	+ .167	55.84	.79		15 36 29.42	33
15 42 25.02	— .073		.80		15 41 29.15	34
15 45 03.98	— .071		.80		15 44 08.11	*35
15 50 14.10	— .081		.81		15 49 18.21	36
15 53 56.56	+ .151		.82		15 53 00.89	37
15 57 11.12	— .047	55.79	.82		15 56 15.25	*38
15 59 26.26	— .089		.83		15 58 30.34	39
16 03 26.58	— .087		.83		16 02 30.66	40
16 07 00.06	+ .077	55.93	.84		16 06 04.30	41
16 12 31.42	— .073		.85		16 11 35.50	42
16 14 42.54	— .089		.85		16 13 46.60	43
16 20 39.40	— .079	55.80	.86		16 19 43.46	44
16 22 48.53	+1.484	+0 55.71	+0 55.86	+2.49	16 21 54.15	*45
17 08 26.50	— .341	+0 59.34	+0 59.39	+1.78	17 07 26.77	*46
17 13 18.54	— .790		.39		17 12 18.36	*47
17 17 43.28	— .779		.41		17 16 43.09	*48
17 21 46.18	— .497		+0 59.41	+1.78	17 20 46.27	49

Nos. 21, 26, 27, 35, 45, 46, 47, 48. Two stars in the field of the transit.
38. β Scorpii double; the smaller star of the 6th magnitude.
46. α Herculis double; the smaller star of the 6th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 8 cont'd.	λ Herculis	4.5	+26°14′	33.2	57.0	17 25 21.2	45.5	9.5
2		α Ophiuchi	2	+12 41	51.2	13.2	17 28 35.7	58.3	20.3
3		*f* Draconis	5.6	+68 14	40.5	38.2	17 33 37.0	36.0	33.8
4		*p* Sagittarii	5	—27 46	48.1	12.2	17 38 36.8	1.4	25.5
5		μ Herculis	4	+27 49	28.0	52.0	17 41 16.7	41.4	5.3
6		*z* Ophiuchi	6.7	−24 51	23.0	46.6	17 46 10.5	34.5	58.0
7		ξ Draconis	3.4	+56 54	29.5	8.5	17 51 48.5	28.5	7.0
8		τ Ophiuchi	5 6	— 8 10	44.9	6.5	17 55 28.5	50.4	12.2
*9		*p* Ophiuchi	4.5	+ 2 33	44.6	6.2	17 58 28.0	49.8	11.4
*10		S^2 Ophiuchi	4	+ 9 33	7.8	29.5	18 00 51.5	13.5	35.2
11		μ^1 Sagittarii	3.4	—21 06	32.5	55.5	18 05 18.8	42.1	5.3
12		Moon II	(17.7)	—27 46	25.5	50.2	18 07 15.8	41.4	6.1
13		δ Sagittarii	3.4	—29 53	2.6	27.3	18 11 52.7	18.0	42.7
14		2114 A. S. C.	6	—30 50	1.5	26.5	18 15 51.8	17.0	42.0
15		λ Sagittarii	4	—25 30	25.0	48.6	18 19 12.9	37.1	0.6
16		2152 A. S. C.	6	—23 38	6.5	30.0	18 29 53.7	17.5	41.0
17		26 Sagittarii	6	—23 58	25.5	49.2	18 33 13.0	36.8	0.5
18		φ Sagittarii	4.5	—27 09	58.2	22.2	18 36 46.6	10.9	35.1
19	14	γ Ursæ Maj.	2	+54 35	24.5	2.0	11 46 39.5	17.0	54.5
20		*b* Virginis	6	+ 4 32	18.6	40.3	11 53 02.1	23.8	45.5
21		1390 A. S. C.	7	+ 6 27	7.7	29.5	11 56 51.2	13.0	34.8
22		α Corvi	4.5	—23 50	40.2	3.6	12 01 27.5	51.0	14.8
23		δ Ursæ Maj.	3	+57 55	23.5	4.6	12 08 45.6	26.5	7.5
24		η Virginis	3.4	+ 0 13	17.0	38.4	12 13 00.1	21.9	43.6
*25		ι Corvi	5.6	—23 57	32.0	55.7	12 16 19.4	43.0	6.7
26		1432 A. S. C.	7	— 3 44	13.0	34.6	12 20 56.4	18.2	39.9
27		1443 A. S. C.	7	— 4 10	59.0	20.8	12 24 42.5	4.3	26.0
28		β Corvi	2.3	—22 31	30.0	53.5	12 27 17.1	40.5	4.0
29		1458 A S. C.	6.7	+ 2 44	46.9	8.1	12 31 30.0	51.7	13.5
*30		γ^1 Virginis	3.4	— 0 35	7.2	28.6	12 34 50.4	12.1	31.0
31		33 Virginis	6.7	+10 26	48.0	10.0	12 39 32.0	54.0	16.2
32		30 Comæ Ber.	6	+28 25	57.2	22.0	12 42 46.5	11.1	35.9
33		ψ Virginis	5.6	— 8 40	36.0	57.9	12 47 19.7	41.5	3.4
34		τ Comæ Ber.	5.6	+18 16	32.3	55.0	12 52 17.9	40.6	3.5
*35		α Ursæ Min.	2.3	+88 28			13 03 25.5		
36		55 Virginis	6	—19 06	9.5	32.5	13 06 55.5	18.4	41.5
37		σ Virginis	5.6	+ 6 19	5.3	27.0	13 10 48.9	10.6	32.5
*38		Mars 1st L.		— 7 03	54.8	16.7	13 13 38 5	0.2	22.1
39		α Virginis	1	—10 20	19.8	41.6	13 18 03.6	15.6	47.6
40		*w* Virginis	6.	+14 38	8.6	31.0	13 21 53.3	15.7	38.0
41		ζ Virginis	4	+ 0 13	6.6	28.2	13 27 50.0	11.7	33.5
42		*t* Centauri	6	—28 45	12.5	37.1	13 31 01.7	26.5	51.2
43		*m* Virginis	5.6	— 7 54	47.2	9.0	13 34 30.9	52.9	14.7
*44	15	1359 A. S. C.	6	+28 40	21.1	45.6	11 29 10.3	35.0	0.0
*45		γ Cephei	8	+76 45	57.8	32.5	11 34 07.2	42.0	16.5
46		ν Virginis	4.5	+ 7 25	12.7	34.5	11 38 56.3	18.0	39.9
47		β Leonis	2.3	+15 26	27.0	49.3	11 42 11.7	34.2	56.8
48		γ Ursæ Maj.	2	+54 35	27.1	4.8	11 46 42.0	19.2	56.8
49		1383 A. S. C.	7	+ 4 22	36.8	38.3	11 51 20.1	41.7	3.6
50		1 Comæ Ber.	6.7	+22 59	3.5	27.0	11 54 50.6	14.0	37.6
51		1393 A. S. C.	7	— 2 14	23.2	45.0	11 59 06.7	28.2	50.1

May 14.—Since the observations of the 8th, three of the wires were accidentally broken. Divided the diaphragm into spaces .10 inch, on a straight line engine: put in new wires, and adjusted the transit for level and collimation. Perfectly clear. Power 180. Telescope dark; unable to separate γ Virginis.

15.—Error of collimation +0s.30.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
17	25	21.28	— .195			+0	59.41	+1.78	17	24	21.68	1
17	28	35.74	— .362	+0	59.30		.41		17	27	35.97	2
17	33	37.10	+ 1.057				.42		17	32	38.74	3
17	38	36.80	— .830				.42		17	37	36.55	4
17	41	16.68	— .172				.43		17	40	17.08	5
17	46	10.52	— .790				.43		17	45	10.30	6
17	51	48.50	+ .453				.44		17	50	49.51	7
17	55	28.50	— .591				.44		17	54	28.47	8
17	58	28.00	— .475				.45		17	57	28.08	*9
18	00	51.50	— .898				.45		17	59	51.65	*10
18	05	18.84	— .743	+0	59.68		.45		18	04	18.65	11
18	07	15.80	— .830				.46		18	06	15.51	12
18	11	52.66	— .860				.46		18	10	52.34	13
18	15	51.76	— .874				.47		18	14	51.42	14
18	19	12.84	— .800				.47		18	18	12.57	15
18	29	53.74	— .775				.48		18	28	53.49	16
18	33	13.00	— .779				.49		18	32	12.73	17
18	36	46.60	— .821			+0	59.49	+1.78	18	35	46.29	18
11	46	39.50	+ .559	+1	10.21	+1	10.28	+2.46	11	45	29.78	19
11	53	02.06	— .679				.29		11	51	51.09	20
11	56	51.24	— .647				.29		11	55	40.30	21
12	01	27.42	— 1.165				.30		12	00	15.96	22
12	08	45.54	+ .733				.31		12	07	35.96	23
12	13	00.20	— .752				.32		12	11	49.13	24
12	16	19.36	— 1.169				.33		12	15	07.86	*25
12	20	56.42	— .815				.34		12	19	45.27	26
12	24	42.52	— .821				.34		12	23	31.36	27
12	27	17.02	— 1.140		10.44		.35		12	26	05.53	28
12	31	30.04	— .708				.35		12	30	18.98	29
12	34	50.46	— .802				.36		12	33	39.30	*30
12	39	32.04	— .579				.37		12	38	21.09	31
12	42	46.54	— .246				.38		12	41	35.91	32
12	47	19.70	— .895				.39		12	46	08.42	33
12	52	17.86	— .445				.39		12	51	07.03	34
13	03	25.50	—36.340		03.70		.41		1	01	38.75	*35
13	06	55.40	— 1.076				.41		13	05	43.91	36
13	10	48.86	— .649				.42		13	09	37.79	37
13	13	38.46	— .868				.42		13	12	27.64	*38
13	18	03.64	— .924	+1	10.36		.43		13	16	52.29	39
13	21	53.32	— .509				.43		13	20	42.38	40
13	27	50.00	— .752				.44		13	26	38.81	41
13	31	01.80	— 1.266				.45		13	29	50.08	42
13	34	30.94	— .884			+1	10.45	+2.46	13	33	19.61	43
11	29	10.40	+ .258			+1	12.74	+2.25	11	27	57.92	*44
11	34	07.20	— 2.959	+1	14.12		.74		23	32	51.50	*45
11	38	56.28	+ .082				.75		11	37	43.61	46
11	42	11.80	+ .138		12.61		.76		11	40	59.18	47
11	46	41.98	+ .713	+1	12.86		.76		11	45	29.93	48
11	51	20.10	+ .063				.77		11	50	07.39	49
11	54	50.54	+ .201				.77		11	53	37.97	50
11	59	06.64	+ .024			+1	12.78	+2.25	11	57	53.88	51

No. 9. *p* Ophiuchi double; the smaller star of the 6.7 magnitude.
10, 25, 44. Two stars in the field of the instrument.
35. α Ursæ Minoris, sub polo.
38. Sidereal time of semidiameter of Mars passing meridian 0s.47.
45. γ Cephei, sub polo.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 15 cont'd.	ε Corvi	4	—21°44′	26.3	49.6	12 03 13.0	36.2	59.7
2		t Virginis	6	+11 09	31.2	13.1	12 06 35.2	57.2	19.5
3		h Comæ Ber.	5.6	+24 50	45.2	8.7	12 09 32.3	56.5	20.5
4		ζ Corvi	5.6	—21 20	49.2	12.2	12 13 35.6	58.7	22.3
5		f Comæ Ber.	5	+26 59	45.8	10.2	12 17 34.9	59.0	23.3
6		1434 A. S. C.	7.8	+ 5 17	44.2	5.9	12 21 27.6	49.3	11.0
7		β Corvi	2.3	—22 31	31.6	55.2	12 27 18.5	41.8	5.5
8		m Comæ Ber.	6	+21 56	41.0	4.3	12 32 27.8	51.0	14.5
9		e Hyd.& Crat	6	—27 27	0.1	24.3	12 36 48.8	13.1	37.4
10		34 Virginis	6	+12 50	44.5	6.5	12 40 28.8	51.0	12.5
11		37 Virginis	6	+ 3 55	3.5	25.2	12 44 46.9	8.5	30.3
12		ε Ursæ Maj.	3	+56 49	57.0	36.8	12 48 16.6	56.2	36.0
13		k^4 Virginis	7	— 2 48	15.3	36.9	12 56 58.5	20.2	42.0
14		g Virginis	6	— 9 53	6.0	28.0	13 00 50.0	12.0	34.0
*15		α Ursæ Min.	2.3	+88 28			13 03 22.0		
16		w Comæ Ber.	5.6	+28 41	33.1	17.6	13 05 42.3	7.0	31.6
*17		Mars 1st L.		— 7 01	12.8	34.3	13 12 56.4	18.0	40.0
18		α Virginis	1	—10 20	21.2	43.1	13 18 05.2	27.1	49.3
19	16	1353 A. S. C.	7	— 5 35	25.0	46.5	11 25 08.4	30.1	52.0
*20		1359 A. S. C.	.6	+28 40	23.0	47.4	11 29 12.0	36.6	1.3
*21		γ Cephei	3	+76 45	59.0	33.5	11 34 08.0	42.5	17.0
22		ν Virginis	4.5	+ 7 25	14.6	36.2	11 38 58.0	29.8	41.7
23		β Leonis	2.3	+15 28	29.0	51.4	11 42 13.8	36.3	58.8
24		γ Ursæ Maj.	2	+54 35	29.1	6.5	11 46 43.8	21.2	58.7
25		1383 A. S. C.	7	+ 4 22	38.6	0.3	11 51 22.0	43.7	5.5
26		1 Comæ Ber.	6	+22 59	5.2	29.0	11 54 52.7	16.2	39.6
27		1393 A. S. C.	7	— 2 14	25.2	46.8	11 59 08.6	30.2	52.0
28		ε Corvi	4	—21 44	28.2	51.4	12 03 14.8	38.0	1.4
29		t Virginis	6.7	+11 09	53.5	15.3	12 06 37.5	59.5	21.8
30		h Comæ Ber.	5.6	+24 50	47.3	11.0	12 09 35.0	58.8	22.8
*31		ζ Corvi	5.6	—21 20	51.2	14.5	12 13 37.8	1.0	24.0
32		f Comæ Ber.	5	+26 59	48.4	12.8	12 17 37.3	1.7	26.0
33		1434 A. S. C.	7	+ 5 17	46.2	7.8	12 21 29.7	51.3	13.1
34		g Comæ Ber.	5.6	+25 27	33.6	57.3	12 24 21.5	45.3	9.5
35		β Corvi	2.3	—22 31	33.5	57.0	12 27 20.3	43.6	7.0
36		m Comæ Ber.	6	+21 56	43.2	6.4	12 32 29.8	53.0	16.5
37		e Hyd & Crat.	6	—27 27	1.8	26.1	12 36 50.5	14.9	39.5
38		34 Virginis	6	+12 50	46.2	8.5	12 40 30.8	52.9	15.4
39		37 Virginis	6	+ 3 55	5.4	27.0	12 44 48.8	10.5	32.2
40		ε Ursæ Maj.	3	+56 49	0.0	39.5	12 48 19.2	58.7	38.5
*41		α Ursæ Min.	2.3	+88 28			13 03 25.8		
42	20	ε Corvi	4	—21 24	40.2	3.3	12 03 26.6	50.0	13.3
43		t Virginis	6	+11 09	5.1	27.0	12 06 49.0	11.0	33.2
44		h Comæ Ber.	5.6	+24 50	59.0	22.7	12 09 46.4	10.3	34.5
*45		ζ Corvi	5.6	—21 20	3.0	26.0	12 13 49.2	13.0	36.0
46		f Comæ Ber.	5	+26 59	0.3	24.4	12 17 48.7	13.0	37.3
47		1434 A. S. C.	7	+ 5 17	58.0	19.7	12 21 41.3	3.0	25.0
48		g Comæ Ber.	5.6	+25 27	45.0	9.0	12 24 33.2	57.0	21.0
49		β Corvi	2.3	—22 31	45.3	8.6	12 27 32.1	55.5	19.0
50		m Comæ Ber.	6	+21 56	35.0	18.2	12 32 41.6	5.0	28.4
51		e Hyd.& Crat.	6	—27 27	13.6	38.0	12 37 02.5	26.8	51.0

May 16.--Error of collimation +0s.32; no error of level.
20.--Adjusted the error of collimation.

Nos. 31, 45. ζ Corvi is preceded by a star of the 6th magnitude, 23s.12 and 23s.08, respectively. Its declination is —21° 17′ nearly.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
12	03	12.96	— .058			+1	12.79	+2.25	12	02	00.11	1
12	06	35.24	+ .108				.79		12	05	22.56	2
12	09	32.64	+ .218				.80		12	08	20.06	3
12	13	35.60	— .059				.80		12	12	22.74	4
12	17	34.64	+ .238				.81		12	16	22.07	5
12	21	27.60	+ .068				.81		12	20	14.86	6
12	27	18.52	— .075	+1	12.98		.82		12	26	05.63	7
12	32	27.92	+ .175				.83		12	31	15.26	8
12	36	48.74	— .096				.84		12	35	35.80	9
12	40	28.86	+ .119				.84		12	39	16.14	10
12	44	46.88	+ .060				.85		12	43	34.09	11
12	48	16.52	+ .702				.85		12	47	04.37	12
12	56	58.58	+ .024				.87		12	55	45.73	13
13	00	50.00	— .007				.87		12	59	37.12	14
13	03	22.00	—23.903		12.04		.88		1	01	45.22	*15
13	05	42.32	+ .257				.88		13	04	29.70	16
13	12	56.30	— .001				.89		13	11	43.88	*17
13	18	05.18	— .019	+1	12.80	+1	12.90	+2.25	13	16	52.26	18
11	25	08.42	+ .027			+1	14.72	+2.12	11	23	53.73	19
11	29	12 06	+ .281				.73		11	27	57.61	*20
11	34	08.00	— 3.046	+1	14.73		.74		23	32	50.21	*21
11	38	58.06	+ .100				.74		11	37	43.42	22
11	42	13.86	+ .160		14.69		.75		11	40	59.27	23
11	46	43.86	+ .747		14.81		.75		11	45	29.86	24
11	51	22.02	+ .083				.76		11	50	07.34	25
11	54	52.54	+ .223				.76		11	53	38.00	26
11	59	08.56	+ .044				.77		11	57	53.83	27
12	03	14.76	— .037				.77		12	01	59.95	28
12	06	37.52	+ .128				.78		12	05	22.87	29
12	09	34.98	+ .240				.78		12	08	20.44	30
12	13	37.70	— .038				.78		12	12	22.88	*31
12	17	37.24	+ .260				.79		12	16	22.71	32
12	21	29.62	+ .088				.79		12	20	14.92	33
12	24	21.44	+ .248				.80		12	23	06.89	34
12	27	20.28	— .053		14.81		.80		12	26	05.43	35
12	32	29.78	+ .197				.81		12	31	15.17	36
12	36	50.56	— .074				.81		12	35	35.68	37
12	40	30.76	+ .141				.82		12	39	16.08	38
12	44	48.78	+ .080				.82		12	43	34.04	39
12	48	19.18	+ .739				.83		12	47	05.09	40
13	03	25.80	—24.648	+1	14.48	+1	14.85	+2.12	1	01	46.30	*41
12	03	26.68	— .803			+1	25.98	+2.52	12	01	59.90	42
12	06	49.06	— .406				.98		12	05	22.67	43
12	09	46.58	— .230				.99		12	08	20.36	44
12	13	49.44	— .802				.99		12	12	22.65	*45
12	17	48.74	— .195				25.99		12	16	22.56	46
12	21	41.40	— .478				26.00		12	20	14.92	47
12	24	33.04	— .220				.00		12	23	06.82	48
12	27	32.10	— .824	+1	25.89		.01		12	26	05.27	49
12	32	41.64	— .270				.02		12	31	15.35	50
12	37	02.38	— .887			+1	26.03	+2.52	12	35	35.46	51

Nos. 15, 21, 41. Sub polo.
17. Sidereal time of semidiameter passing the meridian 0s.47.
20, 31, 45. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 20 cont'd.	34 Virginis	6	+12°50′	58.2	20.4	12 40 42.6	4.8	27.1
2		37 Virginis	6	+ 3 55	17.3	39.0	12 45 00.6	22.4	44.1
3		ε Ursæ Maj.	3	+56 49	11.0	51.0	12 48 30.5	10.0	50.0
4		k^1 Virginis	6.7	— 2 57	14.5	36.0	12 52 57.6	19.3	41.0
5		k^4 Virginis	7	— 2 48	29.0	50.8	12 57 12.5	34.1	56.0
6		g Virginis	5.6	— 9 53	20.0	41.9	13 01 04.0	25.9	48.0
*7		α Ursæ Min.	2.3	+88 28			13 03 41.5		
8		w Comæ Ber.	5	+28 41	6.6	31.3	13 05 56.2	20.8	45.5
*9		Mars 1st L.		— 6 57	34.4	56.0	13 10 17.8	39.6	1.4
10		62 Virginis	7	—10 28	44.6	6.6	13 13 28.8	31.0	13.0
11		α Virginis	1	—10 20	35.1	57.0	13 18 18.9	40.9	3 0
12		η Bootis	3	+19 12	50.2	13.0	13 48 36.2	59.0	22.0
*13		α Bootis	1	+20 01	7.6	30.8	14 09 53.8	16.9	40.0
14		ε Bootis	3	+27 45	43.2	7.5	14 39 32.0	56.5	21.0
15		α^2 Libræ	3	—15 23	50.2	12.4	14 43 35 0	57.4	20.2
16		β Ursæ Min.	3	+74 48	0.5	23.0	14 52 46.0	8.5	31.2
17	28	υ Leonis	4.5	+ 0 03	47.2	8.9	11 30 30.5	52.0	14 0
18		Moon I	(8.0)	— 1 10	29.6	51.5	11 36 13.7	35.8	58.0
19		ν Virginis	4.5	+ 7 25	39.8	1.5	11 39 23.3	45.1	6.8
20		β Leonis	2.3	+15 28	54.1	16.6	11 42 39.2	1.6	24.2
21		β Virginis	3.4	+ 2 40	23.8	45.4	11 44 07.0	28.6	50.3
22	29	υ Leonis	4.5	+ 0 03	46.6	8.2	11 30 29.9	51.5	13.1
*23		γ Cephei	3	+76 45			11 34 30.8		
24		ν Virginis	4.5	+ 7 25	38.9	0.6	11 39 22.4	44.2	6.1
25		β Leonis	2.3	+15 28	53.4	15.6	11 42 38.1	0.5	22.7
26		β Virginis	3.4	+ 2 40	23.0	44.6	11 44 06.2	27.8	49.4
27		γ Ursæ Maj.	2	+54 35	54.0	31.0	11 47 09.0	46.5	24.0
28		π Virginis	5	+ 7 33	41.2	3.0	11 54 25.0	46.9	8.6
29		2 Comæ Ber.	6	+22 21	2.6	26.0	11 57 49.5	13.0	36.4
30		α Corvi	4.5	—23 50	7.5	31.0	12 01 54.7	18.5	42.0
31		1404 A. S. C.	5	+78 30		37.0	12 06 26.3	15.0	
32		6 Comæ Ber.	5	+15 47	42.5	5.0	12 09 37.3	59.6	22.1
33		s Comæ Ber.	5	+18 40	37.0	59.5	12 14 22.5	45.4	8.2
34		b Comæ Ber.	5.6	+28 09	19.0	43.8	12 20 08.5	33.2	57.8
35		Moon I	(9.0)	— 7 20	37.3	59.6	12 25 22.1	44.5	6.8
36		β Corvi	2.3	—22 31	57.5	20.8	12 27 44.2	7.6	31.0
37		d Hyd. & Crat.	5.6	—26 15	10.4	34.6	12 30 58.8	23.0	47.0
*38		γ^1 Virginis	3.4	— 0 35	35.0	56.5	12 35 18.1	39.6	1.3
39		33 Virginis	6	+10 26	15.6	37.5	12 39 59.5	21.6	43.8
40		1480 A. S. C.	6.7	— 9 28	4.7	26.5	12 44 48.5	10.4	32.5
41		ψ Virginis	5.6	— 8 40	3.2	25.2	12 47 47.2	9.1	31.0
42	31	t Comæ Ber.	5.6	+22 01	32.0	55.2	13 00 18.6	41.9	5.2
*43		α Ursæ Min.	2.3	+88 28			13 03 15.0		
44		1516 A. S. C.	6	+12 24	36.1	58.2	13 06 20.3	42.4	4.5
45		e Virginis	6	+10 15	51.2	13.1	13 10 35.2	37.2	19.1
46		ι Centauri	3	—35 52	29.5	56.0	13 13 22.8	49.5	16.2
47		α Virginis	1	—10 20	47.6	9.5	13 18 31.5	53.5	15.5
48		75 Virginis	6	—14 32	20.0	42.3	13 26 04.6	27.0	49.3
49		P Virginis	6	— 4 35	14.0	36.0	13 28 57.6	19.2	41.0
50		1 Bootis	6	+20 46	0.8	24.2	13 34 47.3	10.5	33.8

May 20.—After observing α Virginis, moved the instrument in azimuth; level undisturbed.
24.—The instrumental adjustments were examined.
29.—No error of level or collimation. 38. Power 180. Transit faintly illuminated; unable to separate the stars.
31.—No error of level or collimation. Perfectly clear.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
12	40	42.62	— .387			+1	26.05	+2.52	12	39	16.18	1
12	45	00.68	— .477				.06		12	43	34.14	2
12	48	30.50	+ .274				.06		12	47	04.71	3
12	52	57.68	— .575				.07		12	51	31 04	4
12	57	12.48	— .573				.08		12	55	45.83	5
13	01	03.96	— .656				.08		12	59	37.22	6
13	03	41.50	—26.049	+1	26.25		.09		1	01	49.36	*7
13	05	56.08	— .173				.09		13	04	29.82	8
13	10	17.84	— .621				.10		13	08	51.58	*9
13	13	28.30	— .664				.10		13	12	02.04	10
13	18	18.98	— .662		25.97		.11		13	16	52.21	11
13	48	36.08	— .025		26.17		.16		13	47	09.90	12
14	09	53.82	— .029		26.06		.20		14	08	27.59	*13
14	39	32.04	— .017		26.27		.25		14	38	05.77	14
14	43	35.04	— .067		26.64		.26		14	42	08.71	15
14	52	46.84	+ .179	+1	26.65	+1	26.28	+2.52	14	51	20.74	16
11	30	30.52	+ .439			+1	40.22	—1.00	11	28	50.74	17
11	36	13.72	+ .440				.22		11	34	33.94	18
11	39	23.30	+ .450				.22		11	37	43.53	19
11	42	39.14	+ .289	+1	40.21		.21		11	40	59.22	20
14	44	07.02	+ .414			+1	40.21	—1.00	11	42	27.22	21
11	30	29.86	+ .075			+1	38.83	—0.52	11	28	51 05	22
11	34	30.80	+ .471	+1	39.90		.88		23	32	52.39	*23
11	39	22.44	+ .077				.88		11	37	43.64	24
11	42	38.06	+ .045		38.79		.88		11	40	59.22	25
11	44	06.20	+ .077				.88		11	42	27.40	26
11	47	09.00	— .058		39.44		.87		11	45	30.07	27
11	54	24.94	+ .066				.87		11	52	46.14	28
11	57	49.50	+ .038				.87		11	56	10.67	29
12	01	54.74	+ .121				.87		12	00	15.99	30
12	06	26.10	— .280				.87		12	04	46.95	31
12	09	37.30	+ .051				.87		12	07	58.48	32
12	14	22.52	+ .046				.86		12	12	43.71	33
12	20	08.46	+ .026				.66		12	18	29.63	34
12	25	22.06	+ .091				.86		12	23	43.29	35
12	27	44.22	+ .119	+1	39.01		.96		12	26	05.48	36
12	30	58.76	+ .127				.86		12	29	20.03	37
12	35	18.10	+ .079				.86		12	33	39.32	*38
12	39	59.60	+ .061				.85		12	38	20.81	39
12	44	48.52	+ .095				.85		12	43	09.76	40
12	47	47.14	+ .093			+1	36.85	—0.52	12	46	08.38	41
13	00	18.58	+ .222			+1	39.79	+0.78	12	58	39.01	42
13	03	15.00	+21.505	+1	39.80		.79		1	01	56.71	*43
13	06	20.30	+ .324				.79		13	04	40.83	44
13	10	35.16	+ .345				.79		13	08	55.71	45
13	13	22.80	+ .845				.79		13	11	43.85	46
13	18	31.62	+ .517	+1	39.76		.80		13	16	52.27	47
13	26	04.64	+ .589				.80		13	24	25.43	48
13	28	57.56	+ .490				.80		13	27	18.25	49
13	34	47.32	+ .235			+1	39.81	+0.78	13	33	07.74	*50

No. 9. Sidereal time of semidiameter of Mars passing meridian 0s 46.
13, 50. Two stars in the field of the instrument.
7, 23, 43. Sub polo.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	May 31 cont'd.	O Virginis	6	—11°38′	26.3	48.4	13 39 10.6	32.7	54.8
2		x Virginis	5.6	—17 20	11.5	34.2	13 42 57.0	19.7	42.3
*3		h Centauri	5	—31 08	56.2	21.2	13 45 46.5	11.8	37.2
4		η Bootis	3	+19 12	3.5	26.5	13 48 49.6	12.6	35.5
5		1600 A. S. C.	6.7	—14 12	48.6	10.9	13 57 33.3	55.6	18.0
6		α Draconis	3.4	+65 08	6.9	58.5	14 01 50.4	42.0	33.8
7		Moon I	(11.1)	—18 03	52.5	15.8	14 05 39.2	2.6	26.0
*8		α Bootis	1	+20 01	21.2	44.3	14 10 07.3	30.5	53.3
*9		λ Virginis	4.5	—12 38	28.6	50.9	14 12 13.3	35.5	37.7
10	June 2	ε Bootis	3	+27 45	58.5	22.9	14 39 47.5	12.0	36.6
*11		α^2 Libræ	3	—15 23	6.0	28.2	14 43 50.6	13.0	35.4
12		β Ursæ Min.	3	+74 48	13.8	35.5	14 52 59.1		
13		ι^1 Libræ	5.6	—19 11	9.6	32.5	15 04 55.6	18.5	41.4
14		β Libræ	2.3	— 8 47	29.0	50.8	15 10 12.7	34.5	56.5
15		υ Libræ	6.7	—17 34	53.4	16 0	15 13 38.8	1.5	24.2
16		1746 A. S. C.	6	—11 48	10.3	32.4	15 16 54.5	16.6	38.8
17		ζ^1 Libræ	6	—16 09	18.2	40.5	15 21 03.1	25.7	48.3
18		1758 A. S. C.	6.7	—19 07	29.0	51.6	15 25 14.8	37.6	0.6
19		γ Libræ	4.5	—14 15	39.1	1.4	15 28 23.8	46.2	8.5
20		α Cor. Bor.	2	+27 15	53.8	18.2	15 29 42.6	7.0	31.4
21		κ Libræ	5	—19 09	47.2	10.2	15 34 33.1	56.0	10.0
22		α Serpentis	2.3	+ 6 56	28.0	49.6	15 38 11.5	33.2	55.2
23		b Scorpii	5	—25 16	23 4	47.2	15 43 11.2	35.2	59.2
24		A^1 Scorpii	3.4	—24 51	2.5	26.3	15 45 50.2	14.2	38.0
25		π Scorpii	3.4	—25 39	12.0	36.0	15 51 00.2	24.4	48.5
26		Moon I	(13.2)	—25 04	7.8	32.5	15 52 57.3	21.8	46.7
*27		β^1 Scorpii	2	—19 22	11.6	34.5	15 57 57.5	20.5	43.5
*28		g^1 Serpentis	6	+10 19	3.5	25.3	16 01 47.3	9.3	31.5
29		χ Scorpii	5.6	— 9 39	20.2	42.0	16 05 04.0	26.0	48.0
30		δ Ophiuchi	3	— 3 17	2 9	24.6	16 07 46 3	7.9	29.8
*31		σ Scorpii	4	—25 12	29.9	53.6	16 13 17.5	41.5	5.5
32		γ Herculis	3.4	+19 32	53.6	16.5	16 16 39 5	2.5	25.5
33		α Scorpii	1	—26 04	37.5	1.5	16 21 25.6	49.8	14.0
*34	3	α Bootis	1	+20 01	23.7	46.6	14 10 09.7	32.8	56.0
35		ε Bootis	3	+27 45	59.2	23 5	14 39 48.0	12.4	37.0
*36		α^2 Libræ	3	—15 23	6.5	28.8	14 43 51.3	13.8	36.2
37		β Ursæ Min.	3	+74 48	14.7	37.5	14 53 00.4	22.5	45.5
38		ι^1 Libræ	5.6	—19 11	10.6	32.9	15 04 56.0	18.8	41.4
39		β Libræ	2.3	— 8 47	29.0	51.2	15 10 13.0	34.6	57.0
40		α Cor. Bor.	2	+27 15	54.3	18.6	15 29 43.0	7.2	32.0
41		α Serpentis	2.3	+ 6 56	28.5	50.2	15 38 12.0	33.8	55.8
42		b Scorpii	5	—25 16	24.0	47.8	15 43 11.6	35.5	59.6
43		A^1 Scorpii	5	—24 51	3.0	26.8	15 45 50 7	14.5	38.2
44		π Scorpii	3.4	—25 39	12.6	36.7	15 51 00.9	24.9	48.9
45		β^1 Scorpii	2	—19 22	12.0	34.7	15 57 58.0	31.1	45.8
*46		g^1 Serpentis	6	+10 19	3.5	25.8	16 01 48.0	10.0	32.0
47		χ Scorpii	5.6	— 9 39	20.9	42.6	16 05 04.6	26.7	48.7
48		δ Ophiuchi	3	— 3 17	3.5	25.2	16 07 46.9	8.5	30.3
*49		σ Scorpii	4	—25 12	30.0	54.2	16 13 18.2	42.2	6.2
50		γ Herculis	3.4	+19 32	53.0	16.8	16 16 39.8	2.8	25.9
51		α Scorpii	1	—26 04	38.0	2.1	16 21 26.2	50.3	14.5

June 2.—Clear. No error of level or collimation. ☽ ☌ π Scorpii. After observing β Ursæ Min., the instrument was moved in azimuth.

3.—The adjustments were examined. After observing β Ursæ Min., the instrument was moved in azimuth; level undisturbed.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
13	39	10.56	+ .552			+1	39.81	+0.78	13	37	31.30	*1
13	42	56.94	+ .618				.81		13	41	12.75	2
13	45	46.58	+ .778				.81		13	44	07.55	*3
13	48	49.54	+ .253	+1	39.95		.81		13	47	09.98	4
13	57	33.28	+ .585				.82		13	55	54.04	5
14	01	50.32	— .746				.82		14	00	09.75	6
14	05	39.22	+ .626				.82		14	04	00.03	7
14	10	07.32	+ .244	+1	39.86		.82		14	08	27.74	*8
14	12	13.20	+ .570			+1	39.82	+0.78	14	10	33.95	*9
14	39	47.50	+ .087	+1	41.84	+1	42.09	+0.62	14	38	05.50	10
14	43	50.64	+ .336		42.12		.09		11	42	08.89	*11
14	52	58.74	— .895		37.89		.09		14	51	15.76	12
15	04	55.52	+ .359				.10		15	03	13.78	13
15	10	12.70	+ .309		42.22		.10		15	08	30 91	14
15	13	38.78	+ .350				.10		15	11	57.03	15
15	16	54.52	+ .316				.10		15	15	12.74	16
15	21	03.16	+ .341				.10		15	19	21.40	17
15	25	14.72	+ .359				.10		15	23	32 98	18
15	28	23.80	+ .330				.10		15	26	42.03	19
15	29	42.60	+ .110		42.14		.11		15	28	00.60	20
15	34	33.10	+ .359				.11		15	32	51.35	21
15	38	11.50	+ .213		42.11		.11		15	36	29.60	22
15	43	11.24	+ .398				.11		15	41	29.53	23
15	45	50.24	+ .395				.11		15	44	08.52	24
15	51	00.22	+ .399				.11		15	49	18.51	25
15	52	57.22	+ .397				.12		15	51	15.50	26
15	57	57.52	+ .360		42.25		.12		15	56	15.76	*27
16	01	47.38	+ .194				.12		16	00	05.45	*28
16	05	04.04	+ .304				.12		16	03	22.22	29
16	07	46.30	+ .269		42.03		.12		16	06	04.45	30
16	13	17.48	+ .398				.12		16	11	35.76	*31
16	16	39.52	+ .141				.13		16	14	57.53	32
16	21	25.68	+ .403	+1	42.13	+1	42.13	+0.62	16	19	43 95	33
14	10	09.76	— .103	+1	41.98	+1	42.22	+0.25	14	08	27.44	*34
14	39	48.02	— .065		42.21		.22		14	38	05.74	35
14	43	51.32	— .252		42.21		.22		14	42	08.85	*36
14	53	00.12	+ .671		40.88		.22		14	51	18.57	37
15	04	55.94	— .270				.22		15	03	13.45	38
15	10	12.96	— .082		42.09		.23		15	08	30.65	39
15	29	43.02	— .025		42.43		.23		15	28	00.77	40
15	38	12.06	— .058		42.40		.23		15	36	29.77	41
15	43	11.68	— .109				.23		15	41	29.34	42
15	45	50.64	— .107				.23		15	44	08.30	43
15	51	00.80	— .110				.23		15	49	18.46	44
15	57	57.92	— .099		42.19		.24		15	56	15.58	45
16	01	47.86	— .053				.24		16	00	05.57	*46
16	05	04.70	— .083				.24		16	03	22.38	47
16	07	46.86	— .074		42.28		.24		16	06	04.57	48
16	13	18.20	— .109				.24		16	11	35.85	*49
16	16	39.84	— .038				.24		16	14	57.56	50
16	21	26.22	— .110	+1	42.15	+1	42.24	+0.25	16	19	43.87	51

Nos. 1, 8, 9, 11, 28, 34, 36, 46. Two stars in the field of the instrument.
3. *h* Centauri double; the smaller star of the 8.9 magnitude.
27, 45. *β* Scorpii double; the smaller star of the 5.6 magnitude.
31, 49. *σ* Scorpii double; the smaller star estimated on the 2d to be of the 9th and on the 3d to be of the 8.9 magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	June 3	η Draconis	3	+61°53′		50.8	16 23 36.5	22.5	9.0
2	cont'd.	33 Herculis	7.8	+ 7 26	10.0	32.0	16 30 54.0	16.0	38.0
3		m Scorpii	5	—17 26	23.6	46.2	16 34 09.0	31.6	54.5
*4		552 A. S. C.	6	+66 04	14.2	7.5	16 40 01.0	54.7	48.4
5		k Herculis	6	+ 7 32	38.0	59.8	16 44 21.6	43.5	5.4
*6		ι Ophiuchi	4	+10 26	30.5	52.5	16 48 14.5	36.5	58.6
7		Moon II	(14.2)	—26 42	22.2	47.3	16 51 12.5	37.6	2.5
8		h Draconis	5	+65 23	11.5	3.2	16 56 55.4	47.5	40.0
9		η Ophiuchi	2.3	—15 31	16.8	39.1	17 03 01.8	24.3	46.5
10		29 Scorpii	6.7	—26 47	18.2	42.5	17 06 06.7	31.0	55.5
*11		α Herculis	3.4	+14 35	24.6	47.0	17 09 09.5	32.0	54.5
*12		θ Ophiuchi	3.4	—24 50	13.6	37.5	17 14 01.3	25.2	49.1
13	4	η Ophiuchi	2.3	—15 31	17.2	39.6	17 03 02.0	24.5	47.0
14		29 Scorpii	6.7	—26 47	18.5	42.6	17 06 07.0	31.3	55.6
*15		α Herculis	3.4	+14 35	25.2	47.6	17 09 10.0	32.3	54.6
*16		θ Ophiuchi	3.4	—24 50	13.7	37.5	17 14 01.5	25.5	49.5
17		1990 A. S. C.	6	—21 17	11.6	34.9	17 16 58.0	21.3	44.5
*18		σ Ophiuchi	4.5	+ 4 17	40.2	1.8	17 20 23.6	45.3	7.1
19		λ Scorpii	3	—36 59	42.0	9.0	17 24 36.3	3.5	30.5
20		α Ophiuchi	2	+12 41	34.9	57.0	17 29 19.2	41.4	3.6
21		κ Scorpii	3	—38 56	21.3	48.6	17 38 16.6	44.5	12.7
22		D Ophiuchi	5.6	—21 36	54.3	17.5	17 35 40.8	4.1	27.5
23		p Sagittarii	5	—27 46	31.0	55.5	17 39 20.0	44.5	9.0
24		Moon II	(15.2)	—27 00	32.2	57.3	17 47 22.4	47.5	12.7
25		ξ Draconis	3.4	+56 54	13.2	53.0	17 52 32.7	12.3	52.0
26		γ^2 Sagittarii	3	—30 25	32.3	57.4	17 57 22.5	47.6	12.9
*27		761 A. S. C.	5	+69 22	0.5	2.2	18 03 03.8	5.5	
28		μ^1 Sagittarii	3.4	—21 06	15.5	38.6	18 06 01.8	25.0	48.3
29	5	γ^2 Sagittarii	3	—30 25	32.2	57.5	17 57 22.7	48.0	13.3
*30		761 A. S. C.	5	+69 22		1.5	18 03 03.5	5.5	
31		μ^1 Sagittarii	3.4	—21 06	15.5	38.5	18 06 01.8	25.0	48.0
32		2104 A. S. C.	7	—18 31	9.0	32.0	18 09 55.0	18.0	41.0
*33		G Herculis	5	+24 23	36.2	0.0	18 14 23.7	47.5	11.3
34		2117 A. S. C.	5.6	+23 12	29.3	52.7	18 17 16.3	40.0	3.6
35		λ Sagittarii	4	—25 30	7.7	31.8	18 19 55.7	19.7	43.7
36		δ Ursæ Min.	3	+86 36			18 25 22.5		
37		Clypei Sob.	6.7	—17 2-	22.7	46.0	18 30 09.5	32.9	56.0
38		26 Sagittarii	6	—23 58	8.5	32.2	18 33 56.0	19.8	43.5
39		28 Sagittarii	6	—22 33	44.8	8.0	18 38 31.5	55.0	18.5
40		Moon II	(16.3)	—26 57	38.8	3.6	18 42 28.3	53.0	18.0
41		σ Sagittarii	3	—26 29	22.2	46.3	18 47 10.5	34.9	59.0
42		48 Draconis	5	+57 36	28.0	8.2	18 55 48.8	29.2	10.0
43		ζ Aquilæ	3	+13 38	7.2	29.2	18 59 51.4	13.8	36.2
44		π Sagittarii	4.5	—21 16	18.1	41.2	19 02 04.5	27.8	51.0
45	6	28 Sagittarii	6	—22 33	44.8	8.1	18 38 31.5	55.0	18.4
46		C Draconis	5	+55 23	2.0	40.2	18 41 18.3	56.4	35.0
47		σ Sagittarii	3	—26 29	22.5	46.7	18 47 10.9	35.0	59.2
48		48 Draconis	5	+57 36	27.5	8.5	18 55 48.6	29.0	9.5
49		ζ Aquilæ	3	+13 38	7.2	29.5	18 59 51.8	14.1	36.3
50		π Sagittarii	4.5	—21 16	18.2	41.5	19 02 04.8	27.9	51.2

June 4.—Adjustments as at termination of observations yesterday. ☽ ☌ p Sagittarii.

5.—No error of level or collimation.

6.—48 Draconis is recorded 18*h*. 53*m*. at transit over middle wire. Observations interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
16	23	36.42	+ .072	+1	41.97	+1	42.24	+0.25	16	21	54.25	*1
16	30	54.00	— .058				.24		16	29	11.70	2
16	34	08.94	— .096				.24		16	32	26.60	3
16	40	01.16	— .262				.24		4	38	18.66	*4
16	44	21.66	— .058				.24		16	42	39.36	5
16	48	14.52	— .052				.24		16	46	32.23	*6
16	51	12.42	— .112				.24		16	49	30.07	7
16	56	55.52	+ .118				.25		16	55	13.39	8
17	03	01.70	— .093				.25		17	01	19.36	9
17	06	06.78	— .112				.25		17	04	24.42	10
17	09	09.52	— .047	+1	42.24		.25		17	07	27.22	*11
17	14	01.34	— .107			+1	42.25	+0.25	17	12	18.98	*12
17	03	02.06	— .093			+1	42.64	±0.00	17	01	19.33	13
17	06	07.00	— .112				.64		17	04	24.25	14
17	09	09.94	— .047	+1	42.64		.64		17	07	27.25	*15
17	14	01.54	— .107				.64		17	12	18.79	*16
17	16	58.06	— .100				.64		17	15	15.32	17
17	20	23.60	— .062				.64		17	18	40.90	*18
17	24	36.26	— .133				.64		17	22	53.49	19
17	29	19.22	— .049		42.64		.64		17	27	36.53	20
17	33	16.74	— .138				.64		17	31	33.96	21
17	35	40.84	— .101				.64		17	33	58.10	22
17	39	20.00	— .114				.64		17	37	37.25	23
17	47	22.42	— .112				.64		17	45	39.67	24
17	52	32.64	+ .062				.64		17	50	50.06	25
17	57	22.54	— .119				.64		17	55	39.78	26
18	03	03.80	— .296				.64		6	01	20.86	*27
18	06	01.82	— .102	+1	42.65	+1	42.64	±0.00	18	04	19.08	28
17	57	22.74	— .444			+1	42.24	+0.18	17	55	40.06	29
18	03	03.50	—1.105				.24		6	01	20.16	*30
18	06	01.76	— .381	+1	42.39		.24		18	04	19.14	31
18	09	55.00	— .364				.24		18	08	12.40	32
18	14	23.74	— .113				.24		18	12	41.39	*33
18	17	16.38	— .120				.24		18	15	34.02	34
18	19	55.72	— .410				.24		18	18	13.07	35
18	25	22.50	+5.101		42.38		.24		18	23	45.36	36
18	30	09.42	— .357				.25		18	28	26.81	37
18	33	56.00	— .399				.25		18	32	13.35	38
18	38	31.56	— .389				.25		18	36	48.92	39
18	42	28.34	— .420				.25		18	40	45.67	40
18	47	10.56	— .416				.25		18	45	27.89	41
18	55	48.84	+ .245				.25		18	54	06.83	42
18	59	51.56	— .180	+1	42.21		.25		18	58	09.13	43
19	02	04.52	— .382			+1	42.25	+0.18	19	00	21.89	44
18	38	31.56	— .132			+1	42.62	+0.19	18	36	48.81	45
18	41	18.38	+ .075				.62		18	39	35.83	46
18	47	10.86	— .152				.62		18	45	28.09	47
18	55	48.62	+ .090				.62		18	54	06.09	48
18	59	51.78	— .065	+1	42.53		.62		18	58	09.10	49
19	02	04.72	— .139			+1	42.62	+0.19	19	00	21.96	50

No. 1. Three stars in the field of the instrument.
4, 27, 30. Sub polo.
6. Recorded 16h. 49m. at transit over middle wire.
11, 15. α Herculis double; on the 4th the magnitude of the smaller star was estimated as 6th.
12, 16, 18, 33. Two stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declina nation.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	June 6	B Aquilæ	5	— 8°12′	5.5	27.2	19 05 49.1	11.0	33 0
•2	cont'd.	*d* Sagittarii	5	—19 14	20.3	43.0	19 10 05.9	28.8	52 0
3		δ Draconis	3	+67 23	22.0	18.5	19 14 14.7	11.0	7.5
4		δ Aquilæ	3.4	+ 2 48	31.0	52.8	19 19 14.5	36.2	58.0
5		2276 A. S. C.	6	—21 38	27.2	50.5	19 23 14.0	37.3	9.6
6		2283 A. S. C.	7	+20 36	7.1	30.2	19 26 53.4	16.5	39.6
7		Moon II	(17.3)	—23 26	41.5	6.0	19 35 30.3	54.5	18.8
8		γ Aquilæ	3	+10 14	44.0	5 9	19 40 28.0	49.8	12.0
9		α Aquilæ	1.2	+ 8 27			19 44 47.2	9.0	31.0
10	7	γ Aquilæ	3	+10 14	46.0	6.8	19 40 28.9	51.0	13.0
11		57 Sagittarii	5 6	—19 26	59.2	22.0	19 44 45.0	8.0	31.0
12		β Aquilæ	3.4	+ 6 01	33.8	55.6	19 49 17.3	39.0	1.0
13		*c* Sagittarii	4.5	—28 09	51.3	15.8	19 54 40.4	-5.0	29.5
•14		55 Camelop.	5	+68 55	41.0	41.5	19 58 41.8	42.3	42.5
15		*i* Vulpeculæ	5.6	+23 10			20 01 50.2	13.6	37.2
16		18 Vulpeculæ	6	+26 26	53.5	17.5	20 05 41.8	6.1	30.4
17		α^1 Capricorni	4	—13 00	52.7	15.0	20 10 37.0	59.7	
18		α^2 Capricorni	3	—13 02	16.7	38.8	20 11 01.4	24.0	45.6
•19		κ Cephei	4.5	+77 14		13.0	20 15 51.2	29.0	
20		π Capricorni	5	—18 44	14.5	37.5	20 20 00.5	23.5	46.3
21		λ Ursæ Min.	5	+88 49			20 22 11.0		
22		Moon II	(18.3)	—20 00	14.0	37.4	20 26 01.2	24.9	48.5
23		ζ Delphini	5	+14 08	54.8	17.0	20 29 39.4	1.7	21.0
24		υ Capricorni	5	—18 42	1.4	24.2	20 32 47.0	10.0	33.0
•25		10 Delphini	6	+14 01	52.0	14.2	20 35 36.5	58.8	21.2
26		30 Vulpeculæ	5.6	+24 42	58.7	22.3	20 39 46.2	10.0	34.0
27		χ Cephei	5	+57 01	50.5	30.3	20 43 10.0	49.9	30.0
28		μ Aquarii	4.5	— 9 35	7.6	29.6	20 45 51.6	13.6	35.6
29	8	ζ Delphini	5	+14 08	55.0	17.2	20 29 39.6	2.0	24.5
30		υ Capricorni	5	—18 42	2.0	24.7	20 32 47.5	10.2	33.0
31		30 Vulpeculæ	5.6	+24 42	59.0	22.9	20 39 46.9	10.8	34.6
32		χ Cephei	5	+57 01	51.0	31.0	20 43 10.9	50.8	30.8
33		μ Aquarii	4.5	— 9 35	8.0	29.9	20 45 52.0	14.1	36.0
34		μ Delphini	6	+13 07	7.7	30.0	20 49 52.2	14.5	36.8
35		τ Aquarii	6	— 5 20	15.3	36.8	20 53 58.6	20.4	42.2
36		θ Capricorni	5.6	—17 52	2.4	25.0	20 58 47.8	10.5	33.5
•37		γ Equulei	5	+ 9 30	40.0	1.8	21 04 23.9	46.0	8.0
38		ζ Cygni	3	+29 35	7.3	32.3	21 07 57.3	22.3	47.3
39		Moon II	(19.4)	—15 44	19.3	42.1	21 14 05.1	28.2	51.0
40		α Cephei	3	+61 55	0.5	46.8	21 16 33.0	19.2	5.5
41		35 Capricorni	6	—21 53	14.2	37.6	21 20 01.0	24 5	48.0
42		β Aquarii	3	— 6 16	14.8	36.6	21 24 58.4	20.3	42.2
•43		β Cephei	3	+69 52	14.7	18.0	21 28 21.1	24.3	27.5
44		γ Capricorni	4	—17 23	18.5	41.2	21 33 04.0	26.7	49.4
45		ε Pegasi	2.3	+ 9 09	25.9	47.7	21 38 09.7	31.7	53.7
46		δ Capricorni	3.4	—16 51	17.7	40.3	21 40 02.9	25.6	48.3
47	9	β Aquarii	3	— 6 16	15.0	36.7	21 24 58.5	20.3	42.2
48		γ Capricorni	4	—17 23	18.7	41.4	21 33 04.2	27.0	49.8
49		δ Capricorni	3.4	—16 51	17.7	40.4	21 40 03.0	25.6	48.3
50		B Pegasi	5.6	+25 11	48.6	12.5	21 47 36.5	0.5	24.4

June 7.—No error of collimation or level.
8.—Re-examined all adjustments. Transit accurately in the meridian.
9.—No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
19	05	49.16	— .111			+1	42.63	+0.19	19	04	06.42	1
19	10	06.00	— .135				.63		19	08	23.24	*2
19	14	14.74	+ .186				.63		19	12	32.30	3
19	19	14.50	— .088	+1	42.46		.63		19	17	31.78	4
19	23	13.92	— .138				.63		19	21	31.15	5
19	26	53.36	— .050				.63		19	25	10.68	6
19	35	30.22	— .144				.63		19	33	47.45	7
19	40	27.94	— .072		42.92		.63		19	38	45.24	8
19	44	47.16	— .076	+1	42.61	+1	42.63	+0.19	19	43	04.45	9
19	40	28.94	— .278	+1	43.67	+1	43.81	+0.44	19	38	44.85	10
19	44	45.04	— .514				.81		19	43	00.72	11
19	49	17.34	— .311		43.84		.81		19	47	33.22	12
19	54	40.40	— .575				.81		19	52	56.02	13
19	58	41.82	— 1.508				.81		7	56	56.50	*14
20	01	49.88	— .167				.81		20	00	05.90	15
20	05	41.86	— .137				.81		20	03	57.91	16
20	10	37.24	— .459				.81		20	08	52.97	17
20	11	01.30	— .459		43 93		.82		20	09	17.02	18
20	15	51.06	+ 1.599				.82		20	14	08.84	*19
20	20	00.36	— .500				.82		20	18	16.04	20
20	22	11.00	+21.348	+1	43.79		.82		20	20	48.53	21
20	26	01.20	— .519				.82		20	24	16.86	22
20	29	39.38	— .246				.82		20	27	55.31	23
20	32	47.12	— .507				.82		20	31	02.79	24
20	35	36.54	— .247				.32		20	33	52.47	*25
20	39	46.24	— .153				.82		20	38	02.27	26
20	43	10.14	+ .325				.82		20	41	26.64	27
20	45	51.60	— .433			+1	43.82	+0.44	20	44	07.35	28
20	29	39.66				+1	44.54	+0.30	20	27	55.12	29
20	32	47.48					.54		20	31	02.94	30
20	39	46.84					.54		20	38	02.30	31
20	43	10.90					.54		20	41	26.36	32
20	45	52.00					.54		20	44	07.46	33
20	49	52.24					.54		20	48	07.70	34
20	53	58.66					.54		20	52	14.12	35
20	58	47.84					.54		20	57	03.30	36
21	04	23.94					.54		21	02	39.40	*37
21	07	57.30		+1	44.53		.54		21	06	12.76	38
21	14	05.14					.54		21	12	20.60	39
21	16	33.00			44.15		.54		21	14	48.46	40
21	20	01.06					.54		21	18	16.52	41
21	24	58.46			44.56		.55		21	23	13.91	42
21	28	21.12			44.55		.55		21	26	36.57	*43
21	33	03.96					.55		21	31	19.41	44
21	38	09.74		+1	44.55		.55		21	36	25.19	45
21	40	02.96				+1	44.55	+0.30	21	38	18.41	46
21	24	58.54	— .356	+1	44.61	+1	44.47	0.00	21	23	13.71	47
21	33	04.22	— .435				.47		21	31	19.32	48
21	40	03.00	— .431				.47		21	38	18.10	49
21	47	36.50	— .131			+1	44.47	±0.00	21	45	51.90	50

Nos. 2, 19, 25. Two stars in the field of the instrument.
14. 55 Camelopardi, sub-polo.
19. κ Cephei double; the smaller star of the 8th mag.
37. A star of the 6th mag. follows γ Equulei 11s.19.
43. β Cephei double; the smaller star of the 7.8 mag.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 9	Moon II	(20.4)	—10°48′	32.3	54.8	22 00 17.3	39.8	2.4
2	cont'd.	ζ Cephei	4	+57 25	46.5	27.2	22 07 07.0	47.0	27.5
3		ζ Pegasi	3	+10 00	34.8	56.8	22 35 19.0	41.0	3.0
4		α Piscis Aus.	1	—30 28	48.3	13.3	22 50 38.5	3.7	28.9
5		α Pegasi	2	—14 21	52.6	15.0	22 58 37.4	59.8	22.3
6	11	ι^1 Libræ	5.6	—19 11	13.6	36.4	15 04 59.3	22.3	45.4
7		β Libræ	2.3	— 8 47	32.6	54.5	15 10 16.5	38.5	0.4
8		α Cor. Bor.	2	+27 15	57.5	21.8	15 29 46.3	10.7	35.2
9		α Serpentis	2.3	+ 6 56	32.0	53.6	15 38 15.4	37.1	59.0
10	26	β Libræ	2.3	— 8 47		7.0	15 08 29.0	51.0	13.0
11		α Cor. Bor.	2	+27 15			15 27 58.6	23.0	47.5
12	27	ζ Ursæ Min.	4	+78 17		4.6	15 49 52.5	39.0	
*13		β^1 Scorpii	2	—19 22		50 2	15 56 13.2	36.0	
14		δ Ophiuchi	3	— 3 17	18.4	40 1	16 06 01.7	23.4	45.1
15		σ Scorpii	4	—25 12	45.4	9.4	16 11 33.3	57.2	21.2
16		α Scorpii	1	—26 04		17.5	16 19 41.5	5.5	
17		η Draconis	3	+61 58		5.0	16 21 51.0	37.0	
18	28	η Bootis	3	+19 12	21.2	44.2	13 47 07.2	30.2	53.2
19		κ Virginis	4	— 9 32	41.2	3.5	14 04 25.7	48.0	10.0
20		α Bootis	1	+20 01		2.0	14 08 25.0	48.1	
21		λ Virginis	4	—12 38	47.0	9.3	14 10 31.5	53.8	16.0
22		υ^2 Virginis	6	— 1 15	4.3	26.1	14 13 47.6	9.4	31.2
23		8 Hydræ con.	5.6	—28 46	4.0	28.8	14 18 53.6	18.5	43.4
24		A Ursæ Min.	4	+76 24		25.0	14 27 57.3	29.5	
*25		π Bootis	5	+17 06	30.5	53.2	14 33 15.8	38.5	1.2
26		ε Bootis	3	+27 45	14.0	38.6	14 38 03.2	27.8	52.3
27		Moon I	(9.7)	—21 06	11.0	35.0	14 39 59.0	22.8	46.8
28		α^1 Libræ	6	—15 20	10.0	32.5	14 41 55.0	17.5	40.0
29		α^2 Libræ	3	—15 23	21.5	44.0	14 42 06.5	29.0	51.5
*30		1690 A. S. C.	6	—20 40	26.5	49.5	14 48 12.5	35.4	58.3
31		β Ursæ Min.	3	+74 48		52.0	14 51 15.5	38.0	
32		20 Libræ	3.4	—24 39	0.2	24.0	14 54 47.8	11.6	35.4
*33		ν^2 Libræ	6.7	—15 52	13.2	35.6	14 57 58.0	20.5	43.0
34		ι^1 Libræ	5.6	—19 11	25.2	48.2	15 03 11.2	34.2	57.2
*35	29	π Bootis	5	+17 06	30.7	53.2	14 33 16.0	38.7	1.2
36		ε Bootis	3	+27 45	14.0	38.6	14 38 08.0	27.4	52.0
37		α^1 Libræ	6	—15 20	10.0	32.5	14 41 55.0	17.5	40.0
38		α^2 Libræ	3	—15 23	21.5	44.0	14 42 06.5	29.0	51.5
*39		1690 A. S. C.	6	—20 40	26.3	49.5	14 48 12.8	36.0	59.2
40		β Ursæ Min.	3	+74 48		52.5	14 51 15.1	38.0	
41		20 Libræ	3.4	—24 39	0.2	24.0	14 54 47.8	11.6	35.4
*42		ν^2 Libræ	6.7	—15 52	13.0	35.5	14 57 58.0	20.5	43.1
43		ι^1 Libræ	5.6	—19 11	25.0	48.0	15 03 11.0	34.0	57.0
44		β Libræ	2.3	— 8 47	44.4	6.5	15 08 28.2	50.1	12.1
45		υ Libræ	6.7	—17 34	9.0	31.8	15 11 54.5	17.2	40.0
46		ε Libræ	5.6	— 9 45	52.2	14.2	15 15 36.1	58.0	20.0
47		ζ^1 Libræ	6	—16 09	34.0	56.5	15 19 19.0	41.6	4.2
48		ζ^4 Libræ	6	—16 18	12.8	35.3	15 23 57.9	20.5	43.0

June 26.—Since the preceding observations, the chronometer has been set back 2*m*. Found the first wire of the transit broken.

27.—Removed the diaphragm; replaced the broken wire and adjusted the level and collimation.

28, 29.—No errors of level or collimation. ☽ ☌ —Sagittarii.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	00	17.32	— .338			+1	44.47	0.00	21	58	32.46	1
22	07	07.04	+ .295				.47		22	05	22.86	2
22	35	18.92	— .245	+1	44.45		.47		22	33	34.21	3
22	50	38.54	— .543		44.40		.47		22	48	53.53	4
22	58	37.42	— .215	+1	44.41	+1	44.47	±0.00	22	56	52.74	5
15	04	59.40				+1	45.74	+0.16	15	03	13.66	6
15	10	16.52		+1	45.71		.74		15	08	30.78	7
15	29	46.30			45.73		.74		15	28	00.56	8
15	38	15.42		+1	45.79	+1	45.74	+0.16	15	36	29.68	9
15	08	29.04	— .250	—0	02.03	—0	02.00	—1.00	15	08	30.79	10
15	27	58.62	— .075	—0	01.96	—0	02.00	—1.00	15	28	00.55	11
15	49	52.03	+1.135	—0	03.00	—0	02.99	—0.28	15	49	56.15	12
15	56	13.13	— .324		02.92		.99		15	56	15.80	*13
16	06	01.74	— .242		03.13		.99		16	06	04.49	14
16	11	33.30	— .358				.99		16	11	35.93	15
16	19	41.50	— .363		02.98		.99		16	19	44.13	16
16	21	51.00	+ .298	—0	02.94	—0	02.99	—0.28	16	21	54.29	17
13	47	07.20	— .082	—0	02.51	—0	02.50	+0.18	13	47	09.62	18
14	04	25.68	— .174				.50		14	04	28.01	19
14	08	25.03	— .079		02.56		.50		14	08	27.45	20
14	10	31.52	— .184				.50		14	10	33.84	21
14	13	47.72	— .148				.50		14	13	50.07	22
14	18	53.66	— .248				.50		14	18	55.92	23
14	27	57.27	+ .595				.49		14	28	00.35	24
14	33	15.84	— .089				.49		14	33	18.24	*25
14	38	03.18	— .050		02.45		.49		14	38	05.62	26
14	39	58.92	— .218				.49		14	40	01.20	27
14	41	55.00	— .192				.49		14	41	57.30	28
14	42	06.50	— .193		02.50		.49		14	42	08.80	29
14	48	12.44	— .212				.49		14	48	14.72	*30
14	51	15.50	+ .515	—0	02.51		.49		14	51	18.50	31
14	54	47.80	— .228				.49		14	54	50.06	32
14	57	58.06	— .194				.49		14	58	00.36	*33
15	03	11.20	— .210			—0	02.49	+0.18	15	03	13.48	34
14	33	15.96	— .109			—0	02.61	—0.25	14	33	18.46	*35
14	38	03.00	— .061	—0	02.63		.61		14	38	05.55	36
14	41	55.00	— .235				.61		14	41	57.38	37
14	42	06.50	— .236		02.55		.61		14	42	08.87	38
14	48	12.76	— .258				.61		14	48	15.11	*39
14	51	15.20	+ .626		02.68		.61		14	51	18.44	40
14	54	47.80	— .276				.61		14	54	50.13	41
14	57	58.00	— .239				.61		14	58	00.37	*42
15	03	11.00	— .253				.61		15	03	13.36	43
15	08	28.26	— .210	—0	02.72		.62		15	08	30.67	44
15	11	54.50	— .245				.62		15	11	56.88	45
15	15	36.10	— .213				.62		15	15	38.51	46
15	19	19.06	— .240				.62		15	19	21.44	47
15	23	57.90	— .241			—0	02.62	—0.25	15	24	00.28	48

Nos. 13, 33, 42. Two stars in the field of the instrument.
25, 35. Double; one star estimated of the 5th and the other of the 6th magnitude.
30, 39. 1690 A. S. C. On the 28th this star was seen *triple*, the magnitudes being, respectively, 6th, 7th, and 7.8. On the 29th it appeared *quadruple*, the new companion being of the 9th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 29	α Cor. Bor.	2	+27°15′	9.1	33.6	15 27 58.1	22.5	47.0
2	cont'd.	Moon I	(10.8)	−24 22	49.5	14.3	15 33 39.0	3.7	28.5
3		α Serpentis	2.3	+ 6 56	43.3	5.2	15 36 27.1	49.0	10.9
4		A¹ Scorpii	5	−24 51	18.3	42.2	15 44 06.0	29.9	53.8
5		ρ Scorpii	4	−28 45	16.8	41.6	15 47 06.3	31.0	55.8
6		δ Scorpii	3	−22 10	11.2	34.5	15 50 57.8	21.2	44.6
7	30	ζ⁴ Libræ	6	−16 18	11.2	33.7	15 23 56.4	19 0	41.5
8		α Cor. Bor.	2	+27 15	7.6	32.0	15 27 56.4	20.8	45.1
9		κ Libræ	5	−19 09	1.5	24.5	15 32 47.2	10.2	33.2
10		α Serpentis	2.3	+ 6 56	41.8	3.8	15 36 25.7	47.5	39.5
11		b Scorpii	5	−25 16	37.5	1.5	15 41 25.5	49.5	13.5
12		A¹ Scorpii	5	−24 51	16.6	40.5	15 44 04.4	28.3	52.2
13		ρ Scorpii	4	−28 45	15.5	40.3	15 47 4.9	29.5	54.3
14		δ Scorpii	3	−22 10	9.6	33.0	15 50 56.5	20.0	43.4
*15		π Serpentis	4.5	+23 15	38.8	2.5	15 55 26.2	49.7	13.4
*16		θ Draconis	3.4	+58 59	22.8	10.9	15 58 52.8	35.0	17.0
17		χ Scorpii	5	− 9 39	34.4	56.4	16 03 18.4	40.5	2.5
18		δ Ophiuchi	3	− 3 17	17.0	38.8	16 06 00.6	22.8	44.1
19		σ Scorpii	4	−25 12	44.0	8.1	16 11 32.0	56.0	20.0
20		γ Herculis	3.4	+19 32	7.8	30.8	16 14 53.8	16.8	39.8
21		α Scorpii	1	−26 04	52.0	16.1	16 19 40.2	4.3	28.5
*22		η Draconis	3	+61 53	16.5	2.6	16 21 48.5	34.5	20.7
23		τ Scorpii	3.4	−27 53		35.3	16 25 59.8		
24		Moon I	(11.8)	−26 28	59.4	24.3	16 28 49.4	14 4	39.3
25		m Scorpii	5	−17 26	37.6	0.3	16 32 23.0	45.7	8.3
26		25 Scorpii	6.7	−25 14	19.8	43.8	16 37 07.8	31 8	55.8
27	July 1	α Scorpii	1	−26 04	51.3	15 5	16 19 39.8	4.0	28.2
28		η Draconis	3	+61 53		3.0	16 21 48.0		
29		τ Scorpii	3.4	−27 53	10.5	35.0	16 25 59.5	24.0	48.5
30		m Scorpii	5	−17 26	37.0	59.8	16 32 22.6	45.5	8.3
*31		Jupiter 1st L.		−21 39		25.6	16 41 48.9		
32		54 Herculis	6	+18 42		59.3	16 48 22.1		
*33		α Herculis		+14 35	38.6	1.0	17 07 23.4	45.8	8.2
34		y Ophiuchi	5	−27 59	32.6	57.2	17 13 21.6	46.1	10.7
*35		d Ophiuchi	5	−29 43	22.5	47.6	17 17 12.5	37.5	2.6
36		Moon I	(12.8)	−27 02	51.0	16.1	17 24 41.2	6.3	31.4
37		α Ophiuchi	2	+12 41	48.3	10.5	17 27 32.8	55.0	17.2
38		D Ophiuchi	5	−21 36	8.0	31.2	17 33 54.5	17.8	41.1
39		p Sagittarii	5	−27 46	44.8	9.2	17 37 33.7	58.2	22.6
40	3	α Orionis	1	+ 7 22	46.7	8.5	5 46 30.4	52.2	14.0
41		26 Sagittarii	6	−23 58			18 32 10.5	34.3	58.0
42		M Herculis	5.6	+18 01	14.4	37.2	18 40 00.1	23.0	45.8
*43		64 Serpentis	6	+ 2 20	33.9	55.5	18 49 17.2	38.9	0.6
44		i Aquilæ	5.6	− 5 57	28.0	49.8	18 53 11.5	33.4	55.4
45		ζ Aquilæ	3	+13 38	21.4	43.8	18 54 06.2	28.6	51.0
*46		19 Aquilæ	6	+ 5 50	29.2	51.0	19 01 12.8	34.5	56.4
47		ψ Sagittarii	6	−25 31	0.0	24.1	19 05 48.0	12.0	36.2
*48		1 Vulpeculæ	5	+21 07	36.2	59.5	19 09 22.7	46.0	9.5
49		δ Draconis	3	+67 23	37.3	33.7	19 12 30.0	26.5	23.0
50		Moon II	(14.9)	−24 19	12.5	37.0	19 16 01.5	26.0	50.5

June 30.—Error of collimation +1s.00, level 0s.00, azimuth −0s.43. θ Draconis is recorded 15*h*. 59*m*. at transit over middle wire.

July 1.—Passing clouds; adjustments as yesterday.

3.—Adjusted collimation and level; passing clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
15	27	58.06	— .063	—0	02.48	—0	02.62	—0.25	15	28	00.62	1
15	33	39.00	— .275				.62		15	33	41.35	2
15	36	27.10	— .149	—0	02.66		.62		15	36	29.57	3
15	44	06.04	— .277				.62		15	44	08.38	4
15	47	06.30	— .295				.62		15	47	08.68	5
15	50	57.86	— .264			—0	02.62	—0.25	15	51	00.22	6
15	23	56.36	+ .664			—0	03.20	—0.30	15	24	00.22	7
15	27	56.38	+1.028	—0	03.07		.20		15	28	00.61	8
15	32	47.32	+ .669				.20		15	32	51.29	9
15	36	25.66	+ .778		03.17		.20		15	36	29.64	10
15	41	25.50	+ .678				.20		15	41	29.38	11
15	44	04.40	+ .677				.20		15	44	08.28	12
15	47	04.90	+ .688				.20		15	47	08.79	13
15	50	56.50	+ .674				.21		15	51	00.38	14
15	55	26.12	+ .963				.21		15	55	30.29	*15
15	58	52.70	+2.229				.21		15	58	58.14	*16
16	03	18.44	+ .687				.21		16	03	22.34	17
16	06	00.56	+ .713		03.36		.21		16	06	04.48	18
16	11	32.02	+ .679				.21		16	11	35.91	19
16	14	53.80	+ .908				.21		16	14	57.92	20
16	19	40.22	+ .679		03.22		.21		16	19	44.11	21
16	21	48.56	+1.578	—0	04.05		.21		16	21	53.35	*22
16	25	59.88	+ .684				.21		16	26	03.72	23
16	28	49.38	+ .680				.21		16	28	53.27	24
16	32	22.98	+ .673				.21		16	32	26.86	25
16	37	07.80	+ .678			—0	03.21	—0.30	16	37	11.69	26
16	19	39.76	+ .679	—0	03.66	—0	03.34	—0.10	16	19	43.78	27
16	21	48.54	+1.578		04.04		.34		16	21	53.46	28
16	25	59.50	+ .684				.34		16	26	03.52	29
16	32	22.64	+ .673				.34		16	32	26.65	30
16	41	48.95	+ .677				.34		16	41	54.61	*31
16	48	22.16	+ .899				.34		16	48	26.40	32
17	07	23.40	+ .850		03.17		.34		17	07	27.59	*33
17	13	21.64	+ .683				.34		17	13	25.66	34
17	17	12.54	+ .690				.34		17	17	16.57	*35
17	24	41.20	+ .683				.34		17	24	45.22	36
17	27	32.76	+ .830	—0	03.19		.34		17	27	36.93	37
17	33	54 52	+ .678				.34		17	33	58.54	38
17	37	33.70	+ .704			—0	03.34	—0.10	17	37	37.74	39
5	46	30 36	+ .068	—0	04.71	—0	03.66	—0.18	5	46	34.09	40
18	32	10.50	+ .127				.56		18	32	14.19	41
18	40	00.10	+ .049				.56		18	40	03.71	42
18	49	17.22	+ .077				.56		18	49	20.86	*43
18	53	11.62	+ .092				.56		18	53	15.27	44
18	58	06.20	+ .056	—0	03.36		.56		18	58	09.82	45
19	01	12.78	+ .071				.56		19	01	16.41	*46
19	05	48.06	+ .130				.56		19	05	51.75	47
19	09	22.78	+ .042				.56		19	09	26.38	*48
19	12	30.06	— .158				.56		19	12	33.46	49
19	16	01.50	+ .128			—0	03.56	—0.18	19	16	05.19	50

Nos. 15, 22, 35, 46, 48. Two stars in the field of the instrument.
31. Sidereal time of the semidiameter of Jupiter passing meridian 1s.64.
33. α Herculis double; magnitudes not noted.
43. Three stars in the field.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 3	*e* Aquilæ	6	— 3°07′	37.6	59.4	19 22 21.0	42.7	4.5
*2	cont'd.	h^2 Sagittarii	4.5	—25 14	14.2	38.2	19 27 02.2	26.2	50.2
*3		e^1 Sagittarii	5.6	—16 39	52.0	14.5	19 31 37.0	59.5	22.0
4		χ Aquilæ	6	+11 28	20.8	43.2	19 35 05.0	27.1	49.3
5		γ Aquilæ	3	+10 14	57.8	19.9	19 38 42.0	4.0	26.2
6		57 Sagittarii	6	—19 26	12.0	34.9	19 42 57.6	20.4	43.2
7		β Aquilæ	3.4	+ 6 01	46.6	8.3	19 47 30.0	51.8	13.5
8	4	β Orionis	1	— 8 23	6.8	28.8	5 06 51.1	13.0	35.0
9		α Orionis	1	+ 7 22	47.7	9.5	5 46 31.2	53.0	14.8
10		δ Draconis	3	+67 23		33.6	19 12 30.0	26.5	
11		δ Aquilæ	3.4	+ 2 48	45.7	7.5	19 17 29.2	51.0	12.8
12		*e* Aquilæ	6	— 3 07	37.8	59.5	19 22 21.2	43.0	4.7
*13		h^2 Sagittarii	4.5	—25 14	14.7	38.7	19 27 02.6	26.7	50.8
*14		e^1 Sagittarii	5.6	—16 39	52.5	15.0	19 31 37.5	0.0	22.6
15		χ Aquilæ	6	+11 28	21.3	43.4	19 35 06.5	27.6	49.8
16		γ Aquilæ	3	+10 14	58.4	20.4	19 38 42.8	4.3	26.3
17		57 Sagittarii	6	—19 26	12.0	35.1	19 42 58.2	21.2	44.3
18		β Aquilæ	3.4	+ 6 01	47.0	8.8	19 47 30.5	52.2	14.0
19		2349 A. S. C.	6	—23 10	10.3	33.8	19 51 57.5	21.2	44.8
20		62 Aquilæ	6	— 1 09	28.8	50.5	19 56 12.1	33.8	55.5
21		*i* Vulpeculæ	6	+23 10	16.5	40.1	20 00 [illegible]	27.3	50.9
22		18 Vulpeculæ	6	+26 26	7.0	31.3	20 03 [illegible]	19.8	44.1
23		Moon II	(15.9)	—21 09	33.2	57.1	20 07 20.9	44.8	8.8
*24		κ Cephei		+77 14			20 14 08.1	46.5	24.5
25		λ Ursæ Min.	5	+88 49			20 20 56.5		
26		ε Delphini	4	+10 46	53.0	15.0	20 25 37.0	59.0	21.2
27	5	β^2 Capricorni	3.4	—15 17	21.2	43.8	20 12 06.4	28.9	51.5
28		ε Delphini	4	+10 46	54.5	16.5	20 25 38.5	0.5	22.5
29		H Aquilæ	5.6	— 3 06	45.2	6.9	20 28 28.5	50.2	12.0
30		δ Delphini	5	+14 31	19.0	41.5	20 36 04.0	26.5	49.0
31		Moon II	(17.0)	—17 10	24.5	47.8	20 56 11.1	24.4	57.7
32	7	μ Capricorni	5	—14 18	55.8	18.2	21 44 40.5	2.8	25.1
*33		17 Pegasi	6	+11 20	29.6	51.8	21 49 14.1	36.3	58.4
34		20 Pegasi	6	+12 22	39.1	1.3	21 53 23.5	45.8	8.0
35		α Aquarii	3	— 1 05	56.4	18.2	21 57 39.9	1.6	23.4
36		36 Aquarii	7	— 8 58	21.3	43.3	22 01 05.2	27.2	49.1
37		λ Piscis Aust.	6	—28 32	31.6	56.2	22 05 20.9	45.6	10.2
38		θ Aquarii	4.5	— 8 34	45.5	7.5	22 08 29.5	51.4	13.5
39		30 Pegasi	6	+ 5 00	46.8	8.6	22 12 30.5	52.4	14.0
40		50 Aquarii	6	—14 20	14.2	36.5	22 15 58.8	21.2	43.6
41		H^1 Pegasi	6	+ 3 35	51.3	13.0	22 18 34.8	56.5	18.2
42		β Piscis Aust.	4	—33 10	38.6	4.6	22 22 30.6	56.5	22.5
43		K Pegasi	6.7	+19 25	11.5	34.5	22 24 57.5	20.5	43.4
44		Moon II	(19.0)	— 7 10	17.2	39.5	22 28 01.6	23.8	46.1
45		ζ Pegasi	3	+10 00	50.6	12.6	22 33 34.7	56.7	18.8
46		ψ^1 Piscis Aust.	6	—26 04	3.3	27.5	22 36 51.6	15.7	39.9
47		70 Aquarii	6	—11 23	26.5	48.6	22 40 10.7	32.9	55.1
48		λ Aquarii	4	— 8 25	38.2	0.0	22 44 22.0	44.0	5.7
49		α Piscis Aust.	1	—30 28	4.0	29.3	22 48 54.5	19.6	44.8
50		x^2 Piscium	6	— 0 40	48.0	9.7	22 52 31.5	53.1	14.8

July 4.—Passing clouds. No error of level or collimation.
5 —Observations interrupted by clouds. Adjustments as yesterday.
7.—No error of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
19	22	21.04	+ .375			—0	03.55	—0.18	19	22	24.96	1
19	27	02.20	+ .557				.55		19	27	06.31	*2
19	31	37.00	+ .569				.55		19	31	41.12	*3
19	35	05.08	+ .271				.55		19	35	08.90	4
19	38	41.98	+ .279	—0	03.21		.55		19	38	45.81	5
19	42	57.62	+ .506				.55		19	43	01.68	6
19	47	30.04	+ .306	—0	03.37	—0	03.55	—0.18	19	47	33.90	7
5	06	50.94	+ .015	—0	04.08	—0	03.82	+0.83	5	06	54.77	8
5	46	31.24	+ .014		03.90		.79		5	46	53.04	9
19	12	30.03	— .248				.20		19	12	32.98	10
19	17	29.24	+ .009		03.21		.20		19	17	32.45	11
19	22	21.24	+ .013				.20		19	22	24.45	12
19	27	02.70	+ .019				.20		19	27	05.92	*13
19	31	37.52	+ .017				.20		19	31	40.74	*14
19	35	05.52	+ .009				.19		19	35	08.72	15
19	38	42.34	+ .009		03.15		.19		19	38	45.54	16
19	42	58.16	+ .018				.19		19	43	01.37	17
19	47	30.50	+ .010		03.22		.19		19	47	33.70	18
19	51	57.52	+ .019				.19		19	52	00.73	19
19	56	12.14	+ .013				.18		19	56	15.33	20
20	00	03.72	+ .005				.18		20	00	06.90	21
20	03	55.56	+ .005				.18		20	03	58.74	22
20	07	20.96	+ .018				.18		20	07	24.16	23
20	14	08.10	— .561				.17		20	14	10.71	*24
20	20	56.50	— .749	—0	03.35		.17		20	20	58.92	25
20	25	37.04	+ .010			—0	03.17	+0.83	20	25	40.22	26
20	12	06.36				—0	01.92	+1.05	20	12	08.28	27
20	25	38.50					.91		20	25	40.41	28
20	28	28.56					.91		20	28	30.47	29
20	36	04.00					.90		20	36	05.90	30
20	56	11.10				—0	01.89	+1.05	20	56	12.99	31
21	44	40.48	— .340			—0	00.63	+0.98	21	44	40.77	32
21	49	14.04	— .188				.63		21	49	14.48	*33
21	53	23.44	— .183				.63		21	53	23.89	34
21	57	39.90	— .257	—0	00.68		.63		21	57	40.27	35
22	01	05.22	— .300				.62		22	01	05.54	36
22	05	20.90	— .420				.62		22	05	21.10	37
22	08	29.48	— .298				.62		22	08	29.80	38
22	12	30.46	— .224				.62		22	12	30.86	39
22	15	58.86	— .331				.62		22	15	59.15	40
22	18	34.76	— .232				.61		52	18	35:14	41
22	22	30.56	— .454				.61		22	22	30.72	42
22	24	57.48	— .141				.61		22	24	57.95	43
22	28	01.64	— .011				.61		22	28	02.24	44
22	33	34.68	— .196		00.60		.60		22	33	35.08	45
22	36	51.60	— .341				.60		22	36	51.86	46
22	40	10.76	— .314				.60		22	40	11.05	47
22	44	21.96	— .297				.60		22	44	22.28	48
22	48	54.44	— .434	—0	00.55		.59		22	48	54.60	49
22	52	31.42	— .254			—0	00.59	+0.98	22	52	31.76	50

Nos. 2, 3, 13, 14, 24, 33 Two stars in the field of the instrument.
24. κ Cephei double; magnitudes not recorded.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.		Mag.	Declination.	I.	II.	III.	IV.	V.
						s.	s.	h. m. s.	s.	s.
1	July 7	α	Pegasi	2	+14 21′	8.6	31.0	22 56 53.3	15.6	38.0
2	8	K	Pegasi	6.7	+19 25	12.5	35.5	22 24 58.5	21.5	44.5
*3		η	Aquarii	4	— 0 56	31.9	33.5	22 27 15.0	36.5	58.4
4		ζ	Pegasi	3	+10 00	52.0	13.9	22 33 36.0	58.0	20.1
5		ψ^1	Piscis Aust.	6	−26 04	4.5	28.6	22 36 52.8	16.9	41.0
6		70	Aquarii	6	—11 23	28.0	50.0	22 40 12.0	34.0	56.2
7		λ	Aquarii	4	— 8 25	39.0	1.1	22 44 23.0	45.0	7.0
8		α	Piscis Aust.	1	—30 28	5.5	30.5	22 48 55.6	20.7	45.7
9		x^2	Piscium	6	— 0 40	49.0	10.9	22 52 32.5	54.1	16.0
10		α	Pegasi	2	+14 21	9.5	32.0	22 56 54.5	16.9	39.4
11		c^2	Aquarii	4.5	—22 02	14.7	38.1	23 01 01.6	25.0	48.4
12		60	Pegasi	6	+25 59	22.2	46.3	23 04 10.2	34.3	58.5
13		γ	Piscium	4.5	+ 2 25	15.5	37.3	23 08 59.0	20.8	42.6
14			Moon II	(20.1)	— 1 34	57.0	19.1	23 12 41.2	3.3	25.5
15		66	Pegasi	6	+11 27	22.8	45.0	23 15 07.2	29.4	51.6
*16		κ^1	Piscium	5.6	+ 0 23	7.0	28.8	23 18 50.5	12.2	34.0
*17		2807	A. S. C.	5	+57 40	25.0	6.0	23 22 47.0	27.5	8.0
18		2814	A. S. C.	6.7	— 8 21	39.5	1.5	23 27 23.5	45.5	7.4
19		ι	Piscium	4.5	+ 4 46	6.5	28.2	23 31 50.1	11.8	33.5
20		λ	Piscium	5	+ 0 54	16.2	38.0	23 33 59.6	21.2	43.0
21	9	δ	Ophiuchi	3	— 3 17	22.2	43.9	16 06 05.6	27.3	49.0
*22		σ	Scorpii	4	—25 12	48.8	12.8	16 11 36.7	0.8	24.8
23		α	Scorpii	1	—26 04	56.6	20.8	16 19 45.0	9.2	33.3
*24		η	Draconis	3	+61 53		10.0	16 21 55.7	41.5	29.0
25	10	α	Cor. Bor.	2	+27 15	12.8	37.2	15 28 01.5	25.2	50.2
26		α	Serpentis	2.3	+ 6 56	47.2	8.9	15 36 30.8	52.6	14.5
27		b	Scorpii	5	—25 16	42.6	6.6	15 41 30.6	54.7	18.7
*28		A^1	Scorpii	5	—24 51	21.8	45.7	15 44 09.6	33.5	57.5
29		ζ	Ursæ Min.	4	+78 17	20.5	7.2	15 49 54.0	40.7	27.4
30	11	β	Libræ	2.3	— 8 17	49.0	11.0	15 08 32.9	54.7	16.7
31		α	Cor. Bor.	2	+27 15	13.6	38.0	15 28 02.5	26.9	51.3
32		α	Serpentis	2.3	+ 6 56	47.7	9.7	15 36 31.7	53.6	15.6
33	15	ε	Bootis	3	+27 45	21.6	46.1	14 38 10.6	35.0	59.6
34		β	Ursæ Min.	3	+74 48	32.5	55.5	14 51 18.5	41.5	4.5
35		β	Libræ	2.8	— 8 47	52.6	14.5	15 08 36.5	58.5	20.5
36		α	Cor. Bor.	2	+27 15	17.0	41.4	15 28 05.8	30.1	54.5
37		α	Serpentis	2.3	+ 6 56	51.3	13.3	15 36 35.2	57.0	18.8
38		b	Scorpii	5	—25 16		11.4	15 41 85.4	59.4	23.5
39		ζ	Ursæ Min.	4	+78 17	21.4	9.2	15 49 56.5	42.7	30.5
40		β^1	Scorpii		—19 22	35.2	58.4	15 56 21.5	44.5	7.5
41		β	Orionis	1	— 8 28	17.0	38.7	5 07 00.6	22.4	44.5
42		α	Canis Maj.	1	—16 30	30.0	52.5	6 38 15.1	37.5	0.5
43	26	α	Tauri	1	+16 11	14.0	36.6	4 26 59.2	21.7	44.3
44		α	Orionis	1	+ 7 22	0.6	22.5	5 46 44.3	6.1	28.0
45		θ	Centauri	2	—35 35			13 57 32.5	59.0	25.6
46		α	Bootis	1	+20 01	49.3	12.5	14 8 35.6	58.8	22.0
47		ε	Bootis	3	+27 45	21.2	45.7	14 38 10.2	34.6	59.0

July 8.—Adjustments accurately as yesterday.
9.—No error of collimation or level; azimuth changed.
10.—Collimation +0s.88; level correct.
11.—Corrected error of collimation.
15.—Error of collimation +0s.56; level 0s.00; azimuth —0s.71.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	56	53.30	— .171	—0	00.55	—0	00.59	+0.98	22	56	53.72	1
22	24	58.50	— .141			+0	00.59	+1.05	22	24	57.77	2
22	27	15.06	— .256				.59		22	27	14.21	*3
22	33	36.00	— .196	+0	00.69		.59		22	33	35.21	4
22	36	52.76	— .404				.59		22	36	51.77	5
22	40	12.04	— .314				.60		22	40	11.13	6
22	44	23.02	— .297				.60		22	44	22.12	7
22	48	55.60	— .434		00.58		.60		22	48	54.57	8
22	52	32.50	— .255				.60		22	52	31.65	9
22	56	54.46	— .171		00.59		.61		22	56	53.68	10
23	01	01.56	— .377				.61		23	01	00.57	11
23	04	10.30	— .099				.61		23	04	09.59	12
23	08	59.04	— .288				.61		23	08	58.19	13
23	12	41.22	— .259				.62		23	12	40.34	14
23	15	07.20	— .188				.62		23	15	06.39	15
23	18	50.50	— .249				.62		23	18	49.63	*16
23	22	46.70	+ .241				.63		23	22	46.31	*17
23	27	23.48	— .296				.63		23	27	22.55	18
23	31	50.02	— .225	+0	00.58		.63		23	31	49.17	19
23	33	59.60	— .246			+0	00.63	+1.05	23	33	58.72	20
16	06	05.60	+ .370	+0	01.37	+0	01.41	+0.93	16	06	04.56	21
16	11	36.78	+ .497				.41		16	11	35.87	*22
16	19	44.98	+ .555		01.43		.41		16	19	44.12	23
16	21	55 75	— .356	+0	01.43	+0	01.41	+0.93	16	21	53.98	*24
15	28	01.50	+ .986	+0	02.10	+0	02.14	+0.31	15	28	00.35	25
15	36	30.80	+ .889		02.14		.14		15	36	29.55	26
15	41	30.64	+ .977				.14		15	41	29.48	27
15	44	09.62	+ .968				.14		15	44	08.45	*28
15	49	53.96	+4.332	+0	02.17	+0	02.14	+0.31	15	49	56.15	29
15	08	32.86	— .123	+0	02.04	+0	02.04	+0.83	15	08	30.70	30
15	28	02.46	— .037		02.04		.04		15	28	00.88	31
15	36	31.66	— .090	+0	02.03	+0	02.04	+0.83	15	36	29.53	32
14	38	10.58	+ .478	+0	05.69	+0	05.79	—0.33	14	38	05.27	33
14	51	18.50	+5.940		07.12		.79		14	51	18.65	34
15	08	36.52	+ .036		05.79		.79		15	08	30.77	35
15	28	05.76	+ .469		05.90		.79		15	28	00.44	36
15	36	35.12	+ .185		05.79		.78		15	36	29.52	37
15	41	35.42	— .087				.78		15	41	29.55	38
15	49	56.02	+5.278		05.65		.78		15	49	55.52	39
15	56	21.42	+ .046		05.81		.78		15	56	15.69	40
5	07	00.64	+ .039		05.45		.61		5	06	55.07	41
6	38	15.12	+ .025	+0	05.80	+0	05.59	—0.33	6	38	09.55	42
4	26	59.16	— .137	+0	08.74	+0	08.64	—1.20	4	26	50.38	43
5	46	44.30	— .184		08.50		.66		5	46	35.46	44
13	57	32.40	— .414				.25		13	57	23.74	45
14	08	35.64	— .120		08.34		.24	—1.20	14	08	27.28	46
14	38	10.34	— .079	+0	05.05	+0	04.78	—1.00	14	38	05.48	47

July 26.--No errors of collimation or level. The sidereal clock was put up by Mr. Arthur Stewart since the preceding observations. Stopped clock, and shortened pendulum 1 division after observing *α* Bootis; the rate having been equal to --1s.20 *daily*.

Nos. 3, 16, 17, 24, 28. Two stars in the field of the instrument.

22 double; small star of the 10th magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 26	α² Libræ	3	—15°23′	28.5	51.0	14 42 13.5	36.0	58.5
2	cont'd.	β Ursæ Min.	3	+74 48	33.8	58.0	14 51 20.2	43.0	
3		20 Libræ	3.4	—24 39	7.4	31.2	14 54 55.0	18.9	42.6
4		β Libræ	2.3	— 8 47	51.5	13.5	15 08 35.5	57.5	19.5
5		Moon I	(8.4)	—23 33	33.8	58.3	15 16 22.6	46.9	11.2
6		ι Draconis	3	+59 31	5.2	48.5	15 21 31.0	13.8	58.5
7		α Cor. Bor.	2	+27 15	16.1	40.7	15 28 5.2	29.4	54.0
8		κ Libræ	5	—19 09	10.0	33.0	15 32 56.0	19.0	42.0
9		α Serpentis	2.3	+ 6 56	50.3	12.3	15 36 34.3	56.2	18.1
10		b Scorpii	5	—25 16	46.2	10.1	15 41 34.1	58.1	22.0
11		A¹ Scorpii	5	—24 51	25.0	49.0	15 44 13.0	37.0	1.0
12		π Scorpii	3.4	—25 39	35.0	59.2	15 49 23.2	47.2	11.2
13	27	β Libræ	2.3	— 8 47	50.5	12.5	15 08 34.5	56.5	18.5
14		α Canis Maj.	1	—16 30	44.2	7.2	6 38 29.7	52.5	15.0
15	28	ε Bootis	3	+27 45		0.9	14 38 25.2	49.6	
16		β Ursæ Min.	3	+74 48	48.5	12.0	14 51 34.5	56.8	20.3
17		σ Scorpii	4	—25 12	8.0	32.0	16 11 56.0	20.0	44.0
18		α Scorpii	1	—26 04	15.8	40.1	16 20 04.0	28.2	52.5
19		η Draconis	3	+61 53	30.5	26.7	16 22 12.9	58.9	45.1
20		h Herculis	4.5	+11 50	48.5	11.0	16 25 33.2	55.0	17.5
21		33 Herculis	6.7	+ 7 26	47.5	9.5	16 29 31.6	53.5	15.3
22		m Scorpii	5	—17 26	1.2	24.0	16 32 46.8	9.5	32.3
*23		552 A. S. C.	4.5	+66 04	53.2	47.2	16 38 40.5	34.2	27.5
24		1934 A. S. C.	6	—16 33	30.0	52.5	16 47 15.1	37.6	0.2
25		κ Ophiuchi	6	+ 9 38	48.0	9.9	16 50 31.9	53.8	16.0
26		ε Herculis	3	+31 10	44.5	9.8	16 54 35.2	0.5	26.0
27		60 Herculis	5	+12 58	39.0	1.2	16 58 23.5	45.8	8.2
28		ε Ursæ Min.	4	+82 17		7.5	17 02 48.6	30.5	
29		Moon I	(10 4)	—27 02	24.5	49.6	17 07 14.8	39.9	5.3
*30		θ Ophiuchi	3.4	—24 50	51.2	15.2	17 12 39.2	3.1	27.0
31		33 Scorpii	6	—24 05	0.0	23.8	17 15 47.5	11.3	35.2
32		2003 A. S. C.	6	+20 13	34.3	57.5	17 20 20.6	43.7	6.9
33		h Ophiuchi	6	+ 2 51	3.2	25.0	17 23 46.8	8.5	30.2
34		α Ophiuchi	2	+12 41	12.1	34.5	17 27 56.7	18.9	41.1
35		ο Serpentis	4.5	—12 47	8.3	30.5	17 32 52.7	14.8	37.2
36		p Sagittarii	5	—27 46	8.8	33.2	17 37 57.8	22.3	46.8
37	29	ε Ursæ Min.	4	+82 17		5.5	17 02 47.0	28.3	
*38		α Herculis.	3.4	+14 35	2.2	24.6	17 07 47.0	9.5	32.0
*39		θ Ophiuchi	3.4	—24 50	51.7	15.5	17 12 39.3	3.2	27.0
40		33 Scorpii	6.7	—24 05	0.4	24.2	17 15 48.0	11.6	35.3
41		2003 A. S. C.	6	+20 13	34.5	57.5	17 20 20.8	44.0	7.2
42		h Ophiuchi	6	+ 2 51	3.4	25.2	17 23 47.0	8.7	30.5
43		α Ophiuchi	2	+12 41	12.3	34.6	17 27 56.8	19.0	41.3
44		ο Serpentis	4.5	—12 47	8.5	31.0	17 32 53.1	15.2	37.6
45		p Sagittarii	5	—27 46	9.0	33.6	17 37 58.1	22.6	47.2
46		μ Herculis	3.4	+27 49	48.3	12.8	17 40 37.3	1.9	26.5
47		z Ophiuchi	6.7	—24 51	43.6	7.6	17 45 31.6	55.5	19.6
48		89 Herculis	6	+26 05	35.5	59.5	17 49 23.8	48.0	12.0
49		E Herculis	5	+16 46	37.1	59.8	17 53 22.3	46.0	7.7
*50		p Ophiuchi	4.5	+ 2 33	5.5	27.2	17 57 49.0	10.7	32.5

July 27.--After observing β Libræ, shortened the pendulum 1.2 divisions, the rate having been — 1s.00.

28.--Examined the instrumental adjustments. After observing β Ursæ Min., moved instrument in azimuth; no error of collimation; level undisturbed. ☽ ☌ y Ophiuchi.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	42	13.50	— .294	+0	04.64	+0	04.78	—1.00	14	42	08.43	1
14	51	20.33	+ .345		04.24		.78		14	51	15.89	2
14	54	55.02	— .345				.77		14	54	49.91	3
15	08	35.50	— .261		04.67		.76		15	08	30.48	4
15	16	22.56	— .338				.76		15	16	17.46	5
15	21	31.00.	+ .243				.76		15	21	26.48	6
15	28	05.08	— .078		04.80		.75		15	28	00.25	7
15	32	56.00	— .314				.75		15	32	50.94	8
15	36	34.24	— .186	+0	04.64		.74		15	36	29.31	9
15	41	34.10	— .348				.74		15	41	29.01	10
15	44	13.00	— .346				.74		15	44	07.91	11
15	49	23.16	— .351			+0	04.74	—1.00	15	49	18.07	12
15	08	34.50	— .261	+0	03.69	+0	03.76	—1.00	15	08	30.48	13
6	38	29.72	— .686	+0	19.46	+0	19.48	+0.30	6	38	09.55	14
14	38	25.23	— .065	+0	19.99	+0	19.93	+0.04	14	38	05.24	15
14	51	34.42	+ .671		18.80		.98		14	51	15.16	16
16	11	56.02	— .298				.98		16	11	35.79	17
16	20	04.12	— .303		19.84		.93		16	19	43.89	18
16	22	12.82	+ .248		19.72		.93		16	21	53.14	19
16	25	33.04	— .139				.93		16	25	12.97	20
16	29	31.48	— .157				.93		16	29	11.39	21
16	32	46.76	— .262				.93		16	32	26.57	22
16	38	40.52	— .731				.93		4	38	19.86	*23
16	47	15.08	— .258				.93		16	46	54.89	24
16	50	31.92	— .150				.93		16	50	11.84	25
16	54	35.20	— .047				.93		16	54	15.22	26
16	58	23.54	— .134				.93		16	58	03.48	27
17	02	48.86	+1.535		19.99		.93		17	02	30.46	28
17	07	14.82	— .307				.93		17	06	54.58	29
17	12	39.14	— .296				.93		17	12	18.91	*30
17	15	47.56	— .292				.93		17	15	27.34	31
17	20	20.60	— .104				.93		17	20	00.57	32
17	23	46.74	— .177				.93		17	23	26.63	33
17	27	56.68	— .136	+0	20.10		.93		17	27	36.61	34
17	32	52.70	— .241				.93		17	32	32.53	35
17	37	57.78	— .311			+0	19.93	+0.04	17	37	37.54	36
17	02	46.93	+3.019	+0	19.68	+0	19.73	—0.11	17	02	30.22	37
17	07	47.06	— .251		19.49		.73		17	07	27.08	*38
17	12	39.34	— .583				.73		17	12	19.03	*39
17	15	47.90	— .575				.73		17	15	27.60	40
17	20	20.80	— .201				.73		17	20	00.87	41
17	23	46 96	— .347				.73		17	23	26.88	42
17	27	56.80	— .270	+0	19.81		.73		17	27	36.80	43
17	32	53.08	— .474				.73		17	32	32.88	44
17	37	58.10	— .612				.78		17	37	37.76	45
17	40	37.36	— .128				.73		17	40	17.50	46
17	45	31.58	— .583				.73		17	45	11.27	47
17	49	23.76	— .146				.78		17	49	03.88	48
17	53	22.38	— .236				.73		17	53	02.41	49
17	57	48.98	— .350			+0	19.73	—0.11	17	57	28.90	*50

No. 23. 552 A. S. C. sub polo.
30, 38, 39, 50. Two stars in the field of the instrument.
38. *α* Herculis double; the smaller star of the 6 7 magnitude.
50. *p* Ophiuchi double; the smaller star of the 6.7 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	July 29	Moon I	(11.5)	—26°45′	54.0	19.0	18 02 44.2	9.3	34.4
2	cont'd.	μ^1 Sagittarii	3.4	—21 06	53.6	16.8	18 04 40.0	3.2	26.5
3		g Sagittarii	5.6	—27 05	42.3	6.6	18 08 30.8	55.1	19.4
4		2006 A. S. C.	6	—16 52	39.0	1.5	18 11 24.1	46.5	9.0
5	Aug. 1	α Aquilæ	1.2	+ 8 27	41.3	3.3	19 43 25.0	46.9	9.0
*6		κ Cephei		+77 14			20 14 27.5	5.5	45.5
7		τ^1 Capricorni	6	—15 40	5.0	27.5	20 28 49.9	12.4	35.0
8		δ Delphini	5	+14 31			20 36 25.7	48.0	10.4
9		Moon I	(14.6)	—18 34	59.4	22.8	20 38 46.2	9.5	32.9
10		Moon II	(14.6)	—18 34	7.7	31.1	20 40 54.5	17.9	41.4
11		μ Aquarii	4.5	— 9 35	44.5	6.5	20 44 28.4	50.3	12.4
12		χ Delphini	6	+11 58	42.3	4.5	20 48 26.6	48.8	11.0
*13		K Cephei	5	+56 17	6.0	45.3	20 52 24.0	2.6	42.3
14		ζ Equulei	6	+ 4 53	19.2	41.0	20 57 02.8	24.5	46.4
15		ν Aquarii	5	—12 01	34.9	57.2	21 01 19.5	41.7	4.1
16		ζ Cygni	3	+29 35	43.6	8.3	21 06 33.0	57.8	22.5
17		α Cephei	3	+61 55	37.8	23.1	21 15 09.1	55.0	41.5
18		γ Capricorni	4	—17 23	55.0	17.8	21 31 40.5	3.2	26.0
19		ε Pegasi	2.3	+ 9 09	2.0	24.1	21 36 46.0	8.0	30.0
20	2	τ^1 Capricorni	6	—15 40	3.8	26.5	20 28 49.5	12.5	35.2
21		υ Capricorni	5	—18 42	36.8	0.0	20 31 23.2	46.5	9.6
22		δ Delphini	5	+14 31	40.2	2.7	20 36 25.0	47.3	39.8
23		α Microscopi	5	—34 22	33.5	0.0	20 40 26.0	52.0	18.5
24		μ Aquarii	4.5	— 9 35	44.2	6.2	22 44 28.1	50.0	12.2
25		χ Delphini	6	+11 58	42.5	4.5	20 48 26.5	49.5	10.6
*26		K Cephei	5	+56 17	6.5	45.5	20 52 24.5	3.5	42.5
27		ζ Equulei	6	+ 4 53	18.1	40.8	20 57 02.5	24.3	46.1
28		ν Aquarii	5	—12 01	34.9	57.2	21 01 19.1	41.0	3.3
29		ζ Cygni	3	+29 35	43.0	8.2	21 06 33.0	57.8	23.0
30		2522 A. S. C.	7	—16 51	2.7	26.0	21 10 48.2	10.5	33.8
31		α Cephei	3	+61 55	36.5	22.5	21 15 08.5	54.5	40.5
32		35 Capricorni	6	—21 53	50.7	14.0	21 18 37.2	0.5	23.7
33		Moon II	(15.6)	—14 00	33.0	56.2	21 28 19.0	41.8	5.0
34		γ Capricorni	4	—17 23	53.5	16.8	21 31 40.0	3.2	26.5
35		ε Pegasi	2.3	+ 9 09	1.6	24.0	21 36 45.7	7.5	30.0
36		2591 A. S. C.	7	— 6 08	21.8	43.7	21 41 05.5	27.2	49.0
37		μ Capricorni	5	—14 18	16.0	38.8	21 45 01.0	23.2	46.0
38	3	γ Capricorni	4	—17 23	39.1	1.7	21 31 24.5	47.1	9.8
39		ε Pegasi	2.3	+ 9 09	46.5	8.3	21 36 30.1	52.0	14.0
40		μ Capricorni	5	—14 18	0.5	22.7	21 44 45.0	7.2	29.5
*41		17 Pegasi	6	+11 20	34.6	56.8	21 49 19.0	40.9	2.6
42		19 Pegasi	6	+ 7 30	40.0	1.6	21 53 28.2	45.0	6.8
43		α Aquarii	3	— 1 05	1.2	22.9	21 57 44.6	6.3	28.0
44		φ Piscis Aust.	5.6	—25 58	7.8	31.9	22 04 56.0	20.0	44.0
45		θ Aquarii	4.5	— 8 34	50.5	12.3	22 08 34.1	55.8	17.5
46		Moon II	(16.6)	— 8 52	0.8	23.2	22 13 45.7	8.0	30.8
47		π Aquarii	5	+ 0 34	33.7	55.4	22 17 17.1	38.7	0.3
*48		ζ Aquarii	5	— 0 50	3.0	24.5	22 20 46.1	7.8	29.5
49		η Aquarii	4	— 0 56	35.5	57.0	22 27 18.6	40.3	2.0
50		α Orionis	1	+ 7 22	56.0	17.7	5 46 39.4	1.2	23.0

August 1.—Passing clouds. No error of level or collimation. ☽ ☌ 19 Capricorni during the total eclipse.

2.—Found wires broken; put in a new system, and adjusted for level and collimation. After observations, shortened pendulum 0.6 division.

3.--Light clouds. The wires being unequal in size, a new system was put in and the instrument adjusted.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
18	02	44.18	— .602			+0	19.73	—0.11	18	02	23.85	1
18	04	40.02	— .547	+0	19.95		.73		18	04	19.74	2
18	08	30.84	— .605				.73		18	08	10.51	3
18	11	24.02	— .509			+0	19.73	—0.11	18	11	03.78	4
19	43	25.10	— .261	+0	19.56	+0	19.40	—0.38	19	43	05.44	5
20	14	27.50	+1.431				.40		20	14	09.53	*6
20	28	49.96	— .431				.40		20	28	30.13	7
20	36	25.57	— .217				.40		20	36	05.95	8
20	38	46.16	— .453				.40		20	38	26.31	9
20	40	54.52	— .453				.39		20	40	34.68	10
20	44	28.42	— .386				.39		20	44	08.64	11
20	48	26.64	— .236				.39		20	48	07.01	12
20	52	24.04	+ .274				.39		20	52	04.92	*13
20	57	02.78	— .287				.39		20	56	43.10	14
21	01	19.48	— .404				.39		21	00	59.69	15
21	06	33.04	— .095		19.03		.39		21	06	13.56	16
21	15	09.32	+ .424		19.65		.38		21	14	50.36	17
21	31	40.52	— .444				.38		21	31	20.70	18
21	36	46.02	— .256	+0	19.32	+0	19.38	—0.33	21	36	26.38	19
20	28	49.50	— .363			+0	18.97	—0.33	20	28	30.17	20
20	31	23.22	— .382				.97		20	31	03.87	21
20	36	25.00	— .183				.97		20	36	05.85	22
20	40	26.00	— .499				.97		20	40	06.53	23
20	44	28.14	— .326				.97		20	44	08.84	24
20	48	26.52	— .198				.97		20	48	07.35	25
20	52	24.50	+ .231				.96		20	52	05.77	*26
20	57	02.56	— .241				.96		20	56	43.36	27
21	01	19.10	— .341				.96		21	00	59.80	28
21	06	33.00	— .080	+0	18.99		.96		21	06	13.96	29
21	10	48.24	— .439				.96		21	10	28.84	30
21	15	08.50	+ .357		18.76		.96		21	14	49.90	31
21	18	37.22	— .404				.95		21	18	17.87	32
21	28	19.00	— .353				.95		21	27	59.70	33
21	31	40.00	— .374				.95		21	31	20.68	34
21	36	45.76	— .215	+0	19.09		.95		21	36	26.60	35
21	41	05.42	— .306				.95		21	40	46.16	36
21	45	01.00	— .355			+0	18.95	—0.33	21	44	41.70	37
21	31	24.44				+0	03.72	—0.29	21	31	20.72	38
21	36	30.18		+0	03.71		.72		21	36	26.46	39
21	44	44.98					.72		21	44	41.26	40
21	49	18.78					.72		21	49	15.06	41
21	53	23.32					.72		21	53	19.60	42
21	57	44.60			03.73		.72		21	57	40.88	43
22	04	55.94					.72		22	04	52.22	44
22	08	34.04					.72		22	08	30.32	45
22	13	45.60					.71		22	13	41.89	46
22	17	17.04					.71		22	17	13.33	47
22	20	46.18					.71		22	20	42.47	*48
22	27	18.68					.71		22	27	14.97	49
5	46	39.46		+0	03.53	+0	03.61	—0.29	5	46	35.85	50

No. 6. κ Cephei double. Magnitudes not recorded.
13, 26. Two stars in the field of the transit.
48. ζ Aquarii double; the small star 6th magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s
1	Aug. 5	α Pegasi	2	+14°21	12.7	35.0	22 56 57.3	19.5	41.8
2		m Pegasi	5.6	+ 7 49	52.8	14.9	23 01 36.8	58.8	28.8
3		60 Pegasi	6	+25 59	24.8	49.0	23 04 13.2	37.3	1.5
4		γ Piscium	4.5	+ 2 25	18.7	40.5	23 09 02.2	24.0	45.8
5		b Piscium	6	+ 4 31			23 12 20.5	43.0	5.0
6		2793 A. S. C.	6	—22 39	1.4	24.8	23 15 48.2	11.6	35.2
7		w^3 Piscium	7	— 1 58	11.2	33.1	23 23 55.0	16.9	39.5
8		2816 A. S. C.	6	—27 45	6.5	31.0	23 27 55.5	20.0	44.5
9		ι Piscium	4.5	+ 4 46	9.7	31.6	23 31 53.4	15.3	37.0
10		λ Piscium	5	+ 0 54	19.5	41.2	23 34 08.0	24.8	46.5
11		m Piscium	6	+ 2 36	39.6	1.3	23 38 23.0	44.8	6.7
12		Moon II	(18.7)	+ 2 23	37.2	59.2	23 43 21.2	43.3	5.3
13		26 Piscium	6.7	+ 6 11	23.0	44.8	23 47 06.5	28.4	50.5
14		ω Piscium	4.5	+ 5 59	32.2	54.0	23 51 15.8	37.6	59.5
15		g Ceti	4	—18 13	56.6	19.5	23 55 42.3	5.2	28.1
16		α Andromedæ	1	+28 13	28.0	52.5	0 00 17.2	42.3	6.8
17		α Orionis	1	+ 7 22	55.4	17.2	5 46 39.0	0.9	22.8
18	6	ω Piscium	4.5	+ 5 59	32.0	53.8	23 51 15.5	37.3	59.0
19		g Ceti	4	—18 13			23 55 42.6	5.1	28.1
20		α Andromedæ	1	+28 13	28.6	53.0	0 00 17.5	42.0	6.6
21		γ Pegasi	2.3	+14 18	25.0	47.4	0 05 09.8	32.2	54.6
22		19 A. S. C.	6.7	+ 0 48	0.6	22.4	.0 09 44.2	6.0	27.8
23		d Piscium	6	+ 7 18	48.0	9.8	0 12 31.7	53.5	15.5
24		26 A. S. C.	6.7	— 3 06	45.4	7.2	0 16 28.9	50.6	12.4
25		Moon II	(19.7)	+ 8 07	54.3	16.6	0 29 38.8	1.2	23.5
26		α Cassiopeæ	3	+55 40	21.0	59.2	0 31 37.5	15.8	54.0
27		β Ceti	2.3	—18 52	57.2	20.1	0 35 43.0	6.0	28.9
28		δ Piscium	5	+ 6 43	49.0	10.8	0 40 32.6	54.6	16.3
29		m Ceti	5	— 2 01	16.0	37.7	0 44 59.5	21.2	42.9
30		ϕ^3 Ceti	6	—12 08	25.2	47.3	0 48 09.4	31.5	53.8
31		α App. Sculp.	5	—30 13	12.9	38.0	0 51 03.0	28.1	53.1
32		ε Piscium	4	+ 7 02	4.5	26.2	0 54 48.1	10.0	32.0
33	7	α Cassiopeæ	3	+55 40	20.5	59.3	0 31 38.0	16.6	55.3
34		β Ceti	2.3	—18 52	57.1	20.1	0 35 43.0	6.0	28.8
35		δ Piscium	5	+ 6 43	48.6	10.8	0 40 32.8	54.6	16.5
36		m Ceti	5	— 2 01	15.9	37.7	0 44 59.3	21.0	42.7
37		ϕ^3 Ceti	6	—12 08	25.0	47.3	0 48 09.5	31.7	53.7
38		α App. Sculp.	5	—30 13	12.5	38.0	0 51 03.0	28.0	53.2
39		ε Piscium	4	+ 7 02	4.2	26.1	0 54 48.0	9.8	31.7
40		H Piscium	6.7	+12 16	34.0	56.2	0 58 18.4	40.5	2.8
41		α Ursæ Min.	2.3	+88 28			1 02 46.7		
*42		b Ceti	6	— 8 47	46.0	7.7	1 06 29 6	51.6	13.8
43		f Piscium	6	+ 2 47	58.5	20.5	1 09 42.3	4.0	25.8
44		144 A. S. C.	7	+ 0 54	48.5	10.3	1 14 32.1	53.8	15.5
45		Moon II	(20.8)	+13 34	43.5	6.3	1 17 29.1	51.9	14.6
*46		158 A. S. C.	7	+ 7 08	25.0	47.1	1 20 09.0	30.9	52.6
47		η Piscium	4	+14 32	20.0	42.4	1 23 04.8	27.2	49.6
48		173 A S. C.	6	+16 37	39.6	2.5	1 27 25.2	47.9	10.7
49		105 Piscium	6	+15 36	27.5	50.1	1 31 12.6	35.1	57.6
50		τ Ceti	3.4	—16 47	1.5	24.3	1 36 47.0	9.7	32.4
*51		γ Arietis	5	+18 31	9.0	32.1	1 44 55.1	18 0	41.0

August 5.--New wires: collimation and level adjusted.

6.--The system put in yesterday unsatisfactory; put in a new one, and adjusted the collimation; level undisturbed.

7.--Re-examined the adjustments.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	56	57.26	— .043	+0	02.86	+0	03.12	—0.30	22	56	54.10	1
23	01	36.82	— .052				.12		23	01	33.65	2
23	04	13.16	— .025				.12		23	04	10.04	3
23	09	02.24	— .059				.11		23	08	59.07	4
23	12	20.68	— .057				.11		23	12	17.51	5
23	15	48.24	— .095				.11		23	15	45.04	6
23	23	55.00	— .065				.11		23	23	51.83	7
23	27	55.50	— .104				.11		23	27	52.29	8
23	31	53.40	— .056		03.41		.11		23	31	50.23	9
23	34	03.00	— .061				.11		23	33	59.83	10
23	38	23.08	— .059				.11		23	38	19.91	11
23	43	21.24	— .060				.11		23	43	18.07	12
23	47	06.64	— .054				.10		23	47	03.49	13
23	51	15.82	— .055				.10		23	51	12.67	14
23	55	42.34	— .088				.10		23	55	39.15	15
0	00	17.36	— .021		03.07		.10		0	00	14.24	16
5	46	39.06	— .053	+0	03.16	+0	03.02	—0.30	5	46	35.99	17
23	51	15.52	— .273			+0	02.81	—0.20	23	51	12.44	18
23	55	42.60	— .442				.81		23	55	39.35	19
0	00	17.54	— .104	+0	03.15		.81		0	00	14.63	20
0	05	09.80	— .214		02.77		.81		0	05	06.78	21
0	09	44.20	— .308				.81		0	09	41.08	22
0	12	31.70	— .264				.81		0	12	28.63	23
0	16	28.90	— .335				.81		0	16	25.76	24
0	29	38.88	— .258				.81		0	29	35.81	25
0	31	37.50	+ .250		02.77		.81		0	31	34.94	26
0	35	48.04	— .446	+0	02.67		.81		0	35	39.78	27
0	40	32.66	— .268				.81		0	40	29.58	28
0	44	59.46	— .327				.81		0	44	56.32	29
0	48	09.44	— .397				.81		0	48	06.23	30
0	51	03.02	— .540				.81		0	50	59.67	31
0	54	48.16	— .266			+0	02.81	—0.20	0	54	45.08	32
0	31	37.94	+ .102	+0	03.01	+0	02.80	±0.00	0	31	35.24	33
0	35	43.00	— .179		02.97		.80		0	35	40.02	34
0	40	32.66	— .107				.80		0	40	29.75	35
0	44	59.32	— .131				.80		0	44	56.39	36
0	48	09.44	— .159				.80		0	48	06.48	37
0	51	02.94	— .216				.80		0	50	59.92	38
0	54	47.96	— .106				.80		0	54	45.05	39
0	58	18.38	— .092				.80		0	58	15.49	40
1	02	46.70	+5.690	+0	02.00		.80		1	02	49.59	41
1	06	29.74	— .149				.80		1	06	26.79	*42
1	09	42.22	— .118				.80		1	09	39.30	43
1	14	32.04	— .123				.80		1	14	28.12	44
1	17	29.08	— .088				.80		1	17	26.19	45
1	20	08.92	— .106				.80		1	20	06.01	*46
1	23	04.80	— .085				.80		1	23	01.92	47
1	27	25.18	— .079				.80		1	27	22.30	48
1	31	12.58	— .082				.80		1	31	09.70	49
1	36	46.98	— .172				.80		1	36	44.01	50
1	44	55.04	— .073			+0	02.80	±0.00	1	44	52.17	*51

Nos. 42, 46. Two stars in the field of the instrument.

51. γ Arietis double; two stars of the 5th magnitude; no sensible difference in right ascension; estimated difference of declination 10s.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug. 13	δ Aquilæ	3.4	+ 2°48′		13.2	19 17 34.7	56.3	
2		γ Aquilæ	3	+10 14	3.5	25.5	19 38 47.6	9.7	31.7
3		α Aquilæ	1.2	+ 8 27	23.5	45.5	19 43 07.4	29.3	51.3
4		β Aquilæ	3.4	+ 6 01	52.3	14.2	19 47 36.0	57.9	19.8
5	15	δ Ophiuchi	3	— 3 17	22.3	44.0	16 06 05.8	27.5	49.2
6		α Scorpii	1	—26 04	57.2	21.3	16 19 45.4	9.5	33.5
7		η Draconis	3	+61 53		8.1	16 21 54.2	40.1	
8	16	α Scorpii	1	—26 04	57.0	21.1	16 19 45.2	9.3	33.3
9		μ Herculis	4	+27 49	30.0	54.5	17 40 19.0	43.5	8.0
10		z Ophiuchi	6.7	—24 51	25.0	48.8	17 45 12.6	36.4	0.3
11		89 Herculis	5.6	+26 05	17.0	41.2	17 49 05.2	29.3	53.4
*12		p Ophiuchi	4.5	+ 2 33	47.1	8.8	17 57 30.3	52.1	13.8
13		g Sagittarii	5.6	—27 06	23.4	47.6	18 08 12.0	36.3	0.6
14		2106 A. S. C.	6	—15 52	20.2	42.5	18 11 05.2	27.8	50.3
15		2114 A. S. C.	6	—30 50	3.8	29.0	18 14 54.2	19.5	44.8
16		λ Sagittarii	4	—25 30	27.2	51.2	18 18 15.3	39.5	3.5
*17		ε Aquilæ	4	+14 51	45.0	7.2	18 52 29.7	52.2	14.5
18		ο Sagittarii	4.5	—21 58	28.3	52.0	18 55 15.0	38.4	2.0
19		ζ Aquilæ	3	+13 38	27.0	49.2	18 58 11.5	33.8	56.1
20		2223 A. S. C.	7.8	—14 50	13.3	35.7	19 02 58.2	20.7	43.0
*21		1 Sagittæ	6	+20 58	45.2	8.2	19 08 31.5	54.8	18.0
22		δ Draconis	3	+67 23	41.2	38.0	19 12 34.0	30.5	27.0
23		δ Aquilæ	3.4	+ 2 48	50.8	12 6	19 17 34.3	56.0	17.8
24	19	ζ Aquilæ	3	+13 38	27.2	49.5	18 58 11.7	34.0	56.2
25		π Sagittarii	4.5	—21 16	38.0	1.2	19 00 24.5	47.8	11.0
26		B Aquilæ	6	— 8 12	25.2	47.0	19 04 08.9	31.0	52.8
*27		d Sagittarii	5	—19 14	39.9	3.0	19 08 26.0	48.9	12.0
28		δ Aquilæ	3.4	+ 2 48	51.2	13.0	19 17 34.7	56.5	18.2
29		2276 A. S. C.	6.7	—21 38	47.2	10.5	19 21 33.7	57.2	20.5
30		P Aquilæ	6	— 5 00	43.5	5.2	19 29 27.0	48.8	10.6
31		2310 A. S. C.	6	—15 15	50.2	13.0	19 34 35.3	58.0	20.2
32		γ Aquilæ	3	+10 14	3.5	26.0	19 38 47.8	9.6	32.0
33		α Aquilæ	1.2	+ 8 27	23.5	45.4	19 43 07.3	29.2	51.1
34		β Aquilæ	3.4	+ 6 01	52.2	14.0	19 47 35.8	57.7	19.6
35	22	2114 A. S. C.	6 7	—30 50	5.0	30.4	18 14 55.5	1.0	46.2
36		λ Sagittarii	4	—25 30	28.5	52.5	18 18 16.6	40.7	4.7
37		δ Ursæ Min.	3	+86 36			18 23 32.5		
38		2159 A. S. C.	7	—14 42	0.8	23.2	18 32 45.5	7.9	30.3
*39		4 Aquilæ	5.6	+ 1 54	11.0	32.7	18 36 54.5	16.3	38.1
40		r Sagittarii	6	—20 30	34.4	57.6	18 40 20.7	43.8	7.0
41		σ Sagittarii	3	—26 29	42.5	7.0	18 45 31.3	55.6	19.9
*42		ο Draconis	5	+59 12	31.5	14.0	18 48 56.4	39.0	21.3
*43		ε Aquilæ	4	+14 51	45.5	8.0	18 52 30.3	52.6	15.0
*44		ο Sagittarii	4.5	—21 58	29.2	52.6	18 55 16.1	39.5	3.0
45		π Sagittarii	4.5	—21 16	38.7	1.9	19 00 25.2	48.5	11.7
46		B Aquilæ	6	— 8 12	25.6	47.8	19 04 09.7	31.6	53.5
*47		1 Sagittæ	6	+20 58	46.0	9.2	19 08 32.4	55.6	18.8
48		υ Sagittarii	5.6	—16 15	58.5	21.2	19 12 43.8	6.5	29.1
49		δ Aquilæ	3.4	+ 2 48	51.7	13.4	19 17 35.2	57.0	18.7

August 16.—Examined the instrumental adjustments at 7 p. m.
19.—No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
19	17	34.73		+0	02.09	+0	02.03	—0.22	19	17	32.70	1
19	38	47.60			01.87		.03		19	38	45.57	2
19	43	07.40			02.11		.03		19	43	05.37	3
19	47	36.04		+0	02.03	+0	02.03	—0.22	19	47	34.01	4
16	06	05.76		+0	01.50	+0	01.54	±0.00	16	06	04.22	5
16	19	45.38			01.62		.54		16	19	43.84	6
16	21	54.13		+0	01.51	+0	01.54	±0.00	16	21	52.59	7
16	19	45.18	+ .272	+0	01.71	+0	01.79	+0.24	16	19	43.66	8
17	40	19.00	+ .057				.81		17	40	17.25	9
17	45	12.62	+ .267				.81		17	45	11.08	10
17	49	05.22	+ .067				.81		17	49	03.48	11
17	57	30.42	+ .160				.81		17	57	28.77	*12
18	08	11.98	+ .277				.81		18	08	10.45	13
18	11	05.20	+ .129				.81		18	11	03.52	14
18	14	54.26	+ .295				.81		18	14	52.74	15
18	18	15.36	+ .224				.81		18	18	13.77	16
18	52	29.72	+ .114				.82		18	52	28.01	*17
18	55	15.14	+ .254				.82		18	55	13.57	18
18	58	11.52	+ .098		01 93		.82		18	58	09.80	19
19	02	58.18	+ .225				.82		19	02	56.58	20
19	08	31.54	+ .089				.82		19	08	29.81	*21
19	12	34.14	— .335				.82		19	12	31.99	22
19	17	34.30	+ .132	+0	01.80	+0	01.82	+0.24	19	17	32.61	23
18	58	11.72	+ .241	+0	02.29	+0	02.31	+0.06	18	58	09.65	24
19	00	24.50	+ .511				.31		19	00	22.70	25
19	04	08.98	+ .407				.31		19	04	07.08	26
19	08	25.96	+ .495				.31		19	08	24.14	*27
19	17	34.72	+ .324		02.42		.31		19	17	32.73	28
19	21	33.82	+ .515				.31		19	21	32.02	29
19	29	27.02	+ .383				.31		19	29	25.09	30
19	34	35.34	+ .462				.31		19	34	33.49	31
19	38	47.78	+ .267		02.34		.31		19	38	45.74	32
19	43	07.30	+ .281		02.31		.31		19	43	05.27	33
19	47	35.86	+ .300	+0	02.17	+0	02.31	+0.06	19	47	33.85	34
18	14	55.62	— .164			+0	02.35	±0.00	18	14	53.11	35
18	18	16.60	— .150				.35		18	18	14.10	36
18	23	32.50	+1.861	+0	02.39		.35		18	23	32.01	37
18	32	45.54	— .125				.35		18	32	43.07	38
18	36	54.52	— .090				.35		18	36	52.08	*39
18	40	20.70	— .138				.35		18	40	18.21	40
18	45	31.26	— .152				.35		18	45	28.76	41
18	48	56.44	+ .101				.35		18	48	54.19	*42
18	52	30.28	— .063				.35		18	52	27.87	*43
18	55	16.08	— .141				.35		18	55	13.59	*44
19	00	25.16	— .140				.35		19	00	22.67	45
19	04	09.64	— .111				.35		19	04	07.18	46
19	08	32.40	— .049				.35		19	08	30.00	*47
19	12	43.82	— .128				.35		19	12	41.34	48
19	17	35.22	— .088	+0	02.53	+0	02.35	±0.00	19	17	32.78	49

No. 12. ρ Ophiuchi double; the smaller star of the 6.7 magnitude.
17, 21, 27, 39, 42, 43, 44, 47. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Aug. 23	α Serpentis	2.3	+ 6°56′	47.7	9.6	15 36 31.5	53.3	15.2
2		Moon I	(7.0)	—25 08	40.5	5.0	15 51 29.8	54 5	19.3
3		α Scorpii	1	—26 04	57.5	22.0	16 19 46.1	10.3	34.5
4		υ Sagittarii	5.6	—16 15	58.4	21.1	19 12 43.6	6.3	29.0
5		δ Aquilæ	3.4	+ 2 48	51.5	13.2	19 17 35.0	56.7	18.5
*6		b Vulpeculæ	4	+24 21	23.7	47.5	19 22 11.3	35.0	58.8
*7		h^2 Sagittarii	4.5	—25 14	20.5	44.5	19 27 08.5	32.5	56.5
8		σ Aquilæ	5.6	+ 5 02	43.2	5.0	19 31 26.8	48.5	10.3
9		2310 A. S. C.	6	—15 50	50.5	13.2	19 34 35.8	58.5	21.0
10		γ Aquilæ	3	+10 14	4.0	26.1	19 38 48.0	10.1	32.1
11		α Aquilæ	1.2	+ 8 27	23.6	45.5	19 43 07.5	29.5	51.5
12		β Aquilæ	3.4	+ 6 01	52.5	14.4	19 47 36.3	58.2	20.1
13	24	ε Ophiuchi	3	— 4 18	16.5	38.2	16 09 59.9	21.6	43.3
14		γ Herculis	3.4	+19 32	13.5	36.5	16 14 59.5	22.5	45.5
15		α Scorpii	1	—26 04	57.5	21.7	16 19 45.8	10.0	34.1
16		η Draconis	3	+61 53		8.6	16 21 55.0		
17		τ Scorpii	3.4	—27 53	16.0	40.6	16 26 05.3	29.8	54.5
18		ζ Ophiuchi	3.4	—10 14	45.6	7.6	16 28 29.7	51.8	13.9
19		m Scorpii	5	—17 26	43.0	5.6	16 32 28.4	51.1	14.0
20		Moon I	(8.1)	—26 47	47.6	12.9	16 47 37.7	3.0	28.1
21		κ Ophiuchi	4	+ 9 38	30.0	52.0	16 50 13.9	35.9	57.9
22		ε Herculis	3	+31 10	26.6	51.9	16 54 17.3	42.7	8.0
23		60 Herculis	5	+12 58	21.0	43.4	16 58 05.6	27.9	50.1
24		ε Ursæ Min.	4	+82 17			17 02 29.5		
25	25	ε Herculis	3	+31 10	26.5	51.8	16 54 17.1	42.5	7.7
26		60 Herculis	5	+12 58	20.9	43.1	16 58 05 5	27.7	50.0
27		ε Ursæ Min.	4	+82 17			17 02 28.8		
*28		A Ophiuchi	6	—26 22	52.0	16.3	17 05 40.5	4.7	29.0
29		ζ Draconis	3	+65 55	37.4	30 7	17 08 24.0	17.2	10.4
30		θ Ophiuchi	3.4	—24 50	33.0	57.0	17 12 20.9	44.8	8.7
31		d Ophiuchi	5	—29 43	28.5	53.5	17 17 18.5	43.5	8.5
32		e^2 Ophiuchi	5	—23 50	1.5	25.4	17 21 49.1	12.7	36.5
33		λ Herculis	4.5	+26 14	35.5	59.5	17 24 23.6	47.8	12.1
34		α Ophiuchi	2	+12 41	54.0	16.2	17 27 38.4	0.6	22.8
35		f Draconis	5	+68 14	43.2	42.0	17 32 40.5	39.0	37.5
36		p Sagittarii	5	—27 46	50.3	14.6	17 37 39.2	3.8	28.2
37		μ Herculis	4	+27 49	30.7	55.1	17 40 19.5	43.8	8.2
38		Moon I	(9.1)	—26 58	45.3	10.5	17 43 35 8	1.0	26.3
39		ξ Herculis	4	+29 16	50.5	15.5	17 51 40.2	5.0	30.0
*40	28	2276 A. S. C.	6	—21 38	46.1	9.5	19 21 32.7	56.1	19.5
*41		β^1 Cygni	3	+27 38	33.8	58.2	19 24 22.6	47.0	11.5
42		9 Vulpeculæ	5.6	+19 26	54.1	17.0	19 27 40.0	3.0	26.0
43		σ Aquilæ	5.6	+ 5 02	41.6	3 5	19 31 25.3	47.0	8.8
44		χ Aquilæ	6	+11 28	25.2	47.3	19 35 09.5	31.6	53.8
45		γ Aquilæ	3	+10 14	2.1	24.3	19 38 46.4	8.3	30.5
46		57 Sagittarii	6	—19 26	16.3	39.5	19 43 02.5	25.5	48.5
47		β Aquilæ	3.4	+ 6 01	51.0	12.6	19 47 34.5	56.5	18.2
*48		γ Sagittæ	4.5	+19 04	59 5	22.5	19 51 45.5	8.5	31.5
*49		2358 A. S. C.	6	+24 22	17.3	41.0	19 55 04.9	28.8	52.6
50		2367 A. S. C.	7	—15 29	50.5	13.0	19 59 35.5	58.0	20.5

August 23.—No error of collimation or level.
24.—Cirrus. Adjustments examined.
25.—Cirrus.
28.—No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
15	36	31.46	— .053	+0	02.37	+0	02.35	±0.00	15	36	29.06	1
15	51	29.82	— .099				.35		15	51	27.37	2
16	19	46.08	— .101		02.35		.35		16	19	43.63	3
19	12	43.68	— .085				.35		19	12	41.25	4
19	17	34.98	— .059		02.33		.35		19	17	32.57	5
19	22	11.26	— .028				.35		19	22	08.88	*6
19	27	08.50	— .099				.35		19	27	06.05	*7
19	31	26.76	— .056				.35		19	31	24.35	8
19	34	35.80	— .085				.35		19	34	33.37	9
19	38	48.06	— .049		02.34		.35		19	38	45.66	10
19	43	07.52	— .051		02.23		.35		19	43	05.12	11
19	47	36.30	— .055	+0	02.29	+0	02.35	±0.00	19	47	33.90	12
16	09	59.90	+ .173			+0	02.36	+0.02	16	09	57.71	13
16	14	59.50	+ .088				.36		16	14	57.23	14
16	19	45.82	+ .252	+0	02.45		.36		16	19	43.71	15
16	21	51.87	— .207		02.56		.36		16	21	52.30	16
16	26	05.22	+ .260				.36		16	26	03.12	17
16	28	29.72	+ .192				.36		16	28	27.55	18
16	32	28.42	+ .218				.36		16	32	26.28	19
16	47	37.86	+ .255				.36		16	47	35.75	20
16	50	13.94	+ .124				.36		16	50	11.70	21
16	54	17.30	+ .042				.36		16	54	14.98	22
16	58	05.60	+ .112				.36		16	58	03.35	23
17	02	29.50	—1.279	+0	02.22	+0	02.36	+0.02	17	02	25.86	24
16	54	17.12	+ .026			+0	02.08	—0.30	16	54	15.07	25
16	58	05.44	+ .081				.08		16	58	03.44	26
17	02	28.80	— .921	+0	02.09		.08		17	02	25.80	27
17	05	40.50	+ .182				.08		17	05	38.60	*28
17	08	23.94	— .200				.08		17	08	21.66	29
17	12	20.88	+ .178				.08		17	12	18.98	30
17	17	18.50	+ .193				.08		17	17	16.61	31
17	21	49.04	+ .176				.08		17	21	47.14	32
17	24	23.70	+ .042				.08		17	24	21.66	33
17	27	38.40	+ .081	+0	02.06		.08		17	27	36.40	34
17	32	40.44	— .238				.08		17	32	38.12	35
17	37	39.22	+ .187				.08		17	37	37.33	36
17	40	19.46	+ .039				.08		17	40	17.42	37
17	43	35.78	+ .184				.08		17	43	33.88	38
17	51	40.24	+ .031			+0	02.08	—0.30	17	51	38.19	39
19	21	32.78	+ .281			+0	00.89	—0.68	19	21	32.17	*40
19	24	22.58	+ .066				.89		19	24	21.76	*41
19	27	40.02	+ .106				.89		19	27	39.24	42
19	31	25.24	+ .168				.88		19	31	24.53	43
19	35	09.48	+ .141				.88		19	35	08.74	44
19	38	46.32	+ .146	+0	00.83		.88		19	38	45.59	45
19	43	02.46	+ .271				.88		19	43	01.85	46
19	47	34.56	+ .173	+0	00.79		.88		19	47	33.85	47
19	51	45.50	+ .099				.87		19	51	44.73	*48
19	55	04.92	+ .082				.87		19	55	04.13	*49
19	59	35.50	+ .253			+0	00.87	—0.68	19	59	34.88	50

Nos. 6, 7, 40, 41, 48, 49. Two stars in the field of the instrument.
28. A Ophiuchi double; the stars of equal magnitude.
40. 2276 A. S. C. is recorded 19*h.* 22*m.* at transit over middle wire.

No. for ref.	Month and day.	Name of object.		Mag.	Declination.	I.	II.	III.	IV.	V.
						s.	s.	h. m. s.	s.	s.
1	Aug. 28	66	Draconis	5	+61°32′	33.0	18.8	20 03 04.2	49.7	35.5
2	cont'd.	α^2	Capricorni	3	−13 02	34.0	56.4	20 09 18.7	41.0	3.3
*3		κ	Cephei	4.5	+77 14		32.5	20 14 10.8	49.5	
4		π	Capricorni	5	−18 44	32.4	55.2	20 18 17.9	40.8	3.7
5			Moon I	(12.2)	−19 57	58.0	21.6	20 21 45.3	8.9	32.5
6		2414 A. S. C.		7	−14 16	40.5	2.8	20 25 25.3	47.7	10.0
7		τ^1	Capricorni	7	−15 40	46.0	8.4	20 28 30.9	53.4	15.9
8		υ	Capricorni	5	−18 42	18.8	41.9	20 31 04.9	27.9	50.8
9		δ	Delphini	5	+14 31	22.0	44.5	20 36 06.8	29 2	51.5
10		ε	Aquarii	4.5	−10 04	25.0	46.7	20 39 08.5	30.3	52.0
*11	29	κ	Cephei	4.5	+77 14	53.5	31.8	20 14 09.5	48.0	26.5
12		δ	Delphini	5	+14 31	21.2	43.5	20 36 05.8	28.1	50.6
13		ε	Aquarii	4.5	−10 04	24.0	46.1	20 39 08.0	30.1	52.2
*14		ι	Equulei	5.6	+ 3 41	28.2	50.0	20 51 11.7	33.5	55.3
*15		λ	Equulei	6.7	+ 6 34	42.5	4.2	20 54 26.1	48.0	9.9
16		θ	Capricorni	5.6	−17 52	19.0	41.6	20 57 04.5	27.4	50.1
17		ζ	Cygni	3	+29 35	24.0	49.0	21 06 13.9	39.0	4.0
18			Moon I	(13.2)	−15 55	15.0	38.0	21 10 01.0	24.0	47.0
19		ι	Capricorni	5	−17 30	42.0	5.0	21 13 27.8	50.5	13.0
20		21	Aquarii	6	− 4 14	20.0	41.8	21 17 03.5	25.2	47.0
21		β	Aquarii	3	− 6 16	31.6	53.5	21 23 15.4	37.2	59.1
22		β	Cephei	3	+69 52	32.0	35.8	21 26 38.5	41.8	44.8
*23	30	ε	Equulei	5.6	+ 3 41	27.5	49.2	20 51 10.7	32.5	54.2
*24		λ	Equulei	7	+ 6 34	41.3	3.2	20 54 25.1	47.0	8.9
25		θ	Capricorni	5 6	−17 52	18.3	41.0	20 57 3.8	26.6	49 3
26		χ^3	Capricorni	7	−21 11	44.4	7.6	21 00 31.0	54.3	17.6
27		ζ	Cygni	3	+29 35	23.0	48.1	21 06 13.0	38.0	3.0
28		31	Capricorni	7	−18 07	39.4	2.2	21 09 25.0	47.9	10.7
29		ι	Capricorni	5	−17 30	41.0	4.0	21 13 26.8	49.5	12.5
*30		21	Aquarii	5.6	− 4 14	19.0	40.9	21 17 02.6	24.3	46.0
31		b	Capricorni	5.6	−22 30	55.6	19.1	21 19 42.5	6.1	29.6
32		β	Aquarii	3	− 6 16	30.9	52.6	21 23 14.4	36.3	58.1
*33		β	Cephei	3	+69 52	31.0	34.5	21 26 37.5	40.5	43.5
*34		d	Aquarii	5.6	+ 1 32	49.0	10.9	21 31 32.3	54.6	16.0
*35		ε	Pegasi	2.3	+ 9 09	42.0	4.0	21 36 25.9	47.9	10.0
36		14	Pegasi	5.6	+29 26	2.4	27.0	21 42 52.0	17.0	42.0
37		B	Pegasi	5.6	+25 11	5.0	29.0	21 45 53.0	17.0	41.0
38		17	Pegasi	6	+11 20	29.8	52.2	21 49 14.5	36.8	59 0
39		19	Pegasi	6	+ 7 30	35.5	57.2	21 53 19.0	41.0	3.0
40			Moon I	(14.3)	−10 40	43.0	5.0	21 56 28.1	50.8	13.1
41		36	Aquarii	7	− 8 58	22.0	44.0	22 01 05.9	28.0	50.0
42		φ	Piscis Aust.	5.6	−25 58	3.5	27.6	22 04 51.8	16.0	40.1
43		θ	Aquarii	4.5	− 8 34	46.1	7.9	22 08 30.0	52.0	13.9
44		l	Aquarii	5	−22 23	7.0	30.2	22 12 53.5	17.0	40.8
*45		ζ	Aquarii	4.5	− 0 50	58.8	20.5	22 20 42.2	4.0	25.7
46	31	ζ	Cygni	3	+29 35	23.0	48.0	21 06 12 9	37.9	3.0
47		β	Aquarii	3	− 6 16	30.5	52.3	21 23 14.1	36.0	57.8
*48		β	Cephei	3	+69 52	31.5	34.5	21 26 37.5	40.5	43.7
*49		d	Aquarii	5.6	+ 1 32	48.6	10.5	21 31 32.0	53.6	15.5
50		ε	Pegasi	2.3	+ 9 09	41.5	3.5	21 36 25.5	47.5	9.5

August 29.—Cirri; no instrumental errors.
30.—Collimation and azimuth unchanged.
31.—No error of collimation or azimuth; level −0s.10.

33, 48. β Cephei double; the companion of the 8.9 magnitude.
45. ζ Aquarii double; the small star of the 6th magnitude.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
20	03	04.20	— .246			+0	00.87	—0.68	20	03	03.08	1
20	09	18.68	+ .242	+0	01.00		.87		20	09	18.05	2
20	14	10.96	— .842				.86		20	14	09.26	•3
20	18	18.00	+ .268				.86		20	18	17.41	4
20	21	45.26	+ .273				.86		20	21	44.67	5
20	25	25.26	+ .248				.85		20	25	24.66	6
20	28	30.92	+ .253				.85		20	28	30.32	7
20	31	04.86	+ .267				.85		20	31	04.28	8
20	36	06.80	+ .128				.84		20	36	06.09	9
20	39	08.50	+ .260			+0	00.84	—0.68	20	39	07.92	10
20	14	09.86				+0	00.07	—0.86	20	14	09.79	•11
20	36	05.84					.05		20	36	05.79	12
20	39	08.08					.05		20	39	08.03	13
20	51	11.74					.05		20	51	11.69	•14
20	54	26.12					.05		20	54	26.07	•15
20	57	04.52					.04		20	57	04.48	16
21	06	13.98		—0	00.02		.04		21	06	13.94	17
21	10	01.00					.04		21	10	00.96	18
21	13	27.66					.04		21	13	27.62	19
21	17	03.50					.03		21	17	03.47	20
21	23	15.36		+0	00.02		.03		21	23	15.33	21
21	26	38.58		+0	00.08	+0	00.03	—0.86	21	26	38.55	22
20	51	10.82	— .046			—0	00.87	—1.07	20	51	11.64	•23
20	54	25.10	— .043				.88		20	54	25.94	•24
20	57	03.80	— .070				.88		20	57	04.61	25
21	00	30.98	— .074				.88		21	00	31.79	26
21	06	13.02	— .014	—0	00.98		.88		21	06	13.89	27
21	09	25.04	— .071				.89		21	09	25.86	28
21	13	26.76	— .070				.89		21	13	27.58	29
21	17	02.56	— .055				.89		21	17	03.40	•30
21	19	42.58	— .076				.89		21	19	43.39	31
21	23	14.46	— .057		00.94		.90		21	23	15.30	32
21	26	37.40	+ .120		00.95		.90		21	26	38.42	•38
21	31	32.56	— .048				.90		21	31	33.41	•34
21	36	25.96	— .040	—0	00.73		.90		21	36	26.82	•35
21	42	52.08	— .015				.91		21	42	52.98	36
21	45	53.00	— .021				.91		21	45	53.89	37
21	49	14.46	— .038				.91		21	49	15.33	38
21	53	19.14	— .042				.92		21	53	20.02	39
21	56	28.00	— .062				.92		21	56	28 86	40
22	01	05.98	— .060				.92		22	01	06.84	41
22	04	51.80	— .081				.92		22	04	52.64	42
22	08	29.96	— .059				.93		22	08	30 83	43
22	12	53.70	— .076				.93		22	12	54.55	44
22	20	42.24	— .051			—0	00.93	—1.07	22	20	43.12	•45
21	06	12.96	— .113	—0	01.14	—0	01.09	—1.21	21	06	13.94	46
21	23	14.14	— .071		01.27		.10		21	23	15.17	47
21	26	37.54	— .186		01.10		.11		21	26	38.46	•48
21	31	32.04	— .079				.11		21	31	33.07	•49
21	36	25.50	— .088	—0	01.23	—0	01.12	—1.21	21	36	26.53	50

Nos. 3, 24, 30, 35, 49. Two stars in the field of the instrument.
3, 11. κ Cephei double; smaller star of the 8.9 magnitude.
14, 23. ε Equulei double; smaller star of the 7.8 magnitude.
15, 24. λ Equulei double and equal; estimated on 29th as 6.7 and on 30th as 7th magnitude.
34. Cirrus.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s
1	Aug. 31	θ Aquarii	4.5	— 8°34′	45.8	7.6	22 08 29.5	51.5	13.5
2	cont'd.	l Aquarii	5	—22 23	6.8	30.2	22 12 53.5	16.9	40.5
3		2673 A. S. C.	7	— 1 59	43.5	5.3	22 16 27.0	48.7	10.5
*4		ζ Aquarii	4.5	— 0 50	58.5	20.0	22 20 41.7	3.5	25.2
5		L Aquarii	7	—18 17	32.5	55.6	22 27 18.5	41.4	4.2
6		64 Aquarii	7	—10 51	12.8	35.0	22 30 57.0	19.2	41 5
7		ζ Pegasi	3	+10 00	51.0	13.0	22 33 35.0	57.2	19.2
8		45 Pegasi	6	+18 32	1.7	24.5	22 37 47.5	10.3	33.2
9		Moon I	(15.3)	— 5 13	4.6	27.0	22 41 49.0	11.1	33.5
10		Moon II	(15.3)	— 5 13	8.2	30.5	22 43 52.6	14.8	37.3
11		α Piscis Aust.	1	—30 28	4.4	29.6	22 48 54.8	20.0	45.0
12		x^1 Piscium	6	+ 0 07	38.0	0.0	22 51 21.7	43.5	5.0
13		β Piscium	5	+ 2 54	6.6	28.2	22 55 50.0	11.7	33.5
14	Sept. 1	ζ Pegasi	3	+10 00	50.5	12.5	22 33 34.5	56.5	18.5
*15		45 Pegasi	6	+18 32	1.0	24.0	22 37 46.6	9.5	32.5
16		λ Aquarii	4	— 8 25	37.8	59.7	22 44 21.6	43.5	5.5
17		α Piscis Aust.	1	—30 28	4.1	29.2	22 48 54.5	19.8	44.9
18		x^1 Piscium	6	+ 0 07	37.5	59.0	22 51 20.7	42.5	4.5
19		β Piscium	5	+ 2 58	6.2	28.0	22 55 49 6	11.3	33.0
20		h Pegasi	4.5	+24 37	37.0	0.8	22 59 21.6	48.4	12.4
*21		π Cephei	5	+74 32		33.3	23 02 54.2	15.5	
22		φ Aquarii	5	— 6 54	24.0	45.8	23 06 07.5	29.4	51.4
23		ψ^2 Aquarii	5	—10 03	56.5	18.5	23 09 40.6	2.7	24.8
24		τ Pegasi	5	+22 52	1.6	25.2	23 12 48.8	12.5	36.1
*25		b^2 Aquarii	5	—21 31	57.3	20.6	23 17 44.0	7.5	30.8
26		s Cephei	5.6	+69 29		36.0	23 20 38.0	39.8	
27		b^4 Aquarii	5.6	—21 47	13.0	36.4	23 24 59.8	23.1	46.5
28		Moon II	(16.3)	+ 0 30	14.8	36.8	23 28 58.9	21.0	43.0
29		ι Piscium	4.5	+ 4 46	5.4	27.1	23 31 48.8	10.5	32.3
30		λ Piscium	5	+ 0 54	14.8	36.6	23 33 58.4	20.1	41.8
31		Y Aquarii	6	—12 47	22.6	44.8	23 39 07.0	29.3	51.5
32		A^5 Aquarii	6	—19 48	24.8	48.0	23 43 10.8	34.0	57.2
33		26 Piscium	6	+ 6 11	18.5	40.5	23 47 02.4	24.3	46.1
34		ω Piscium	4.5	+ 5 58	27.7	49.5	23 51 11.4	33.2	55.0
35	2	ι Piscium	4.5	+ 4 46	5.0	26.8	23 31 48.6	10.4	32.1
36		λ Piscium	5	+ 0 54	14.8	36.5	23 33 58.2	19.8	41.5
37		Y Aquarii	6	—12 47	22.0	44.4	22 39 06.7	29.0	51.2
38		A^5 Aquarii	6	—19 48	24.5	47.5	23 43 10.5	33.5	56.6
39		26 Piscium	6.7	+ 6 11	18.5	40.0	23 47 01.8	23.6	45.5
40		ω Piscium	4.5	+ 5 59	27.4	49.1	23 51 10.7	32.8	54.5
41		c^1 Piscium	6.7	+ 8 04	34.1	55.9	23 54 17.6	39.5	1.5
42		s Piscium	5	— 6 36	30.2	52.0	23 57 13.8	35.7	57.5
43		α Andromedæ	1	+28 13	23.5	48.2	0 00 12.8	37.5	2.2
44		γ Pegasi	2 3	+14 18	20.5	42.7	0 05 05.2	27.6	50.0
45		19 A. S. C.	6.7	+ 0 48	56.5	18.1	0 09 39.6	1.2	23.2
46		Moon II	(17.4)	+ 6 16	5.8	28.0	0 14 50.3	12.5	34.7
47		α Phœnicis	2	—43 10	27.5	57.5	0 18 27.1	56.8	26.6
48		n Ceti	6	— 4 50	13.7	35.8	0 21 57 5	19.3	41.2
49		52 Piscium	6	+19 25	31.8	54.8	0 24 17.8	40.7	3 8
50		51 A. S. C.	6	— 1 23	41.5	3.3	0 27 25.0	46.8	8.5
*51		α Cassiopeæ	3	+55 40	17.0	55.5	0 31 33.8	12.5	50.8

September 1.—Corrected the level error. The pendulum was altered.
2.—Examined the adjustments. No error of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	08	29.58	— .068			—0	01.14	—1.21	22	08	30.65	1
22	12	53.58	— .052				.14		22	12	54.67	2
22	16	27.00	— .075				.15		22	16	28.08	3
22	20	41.78	— .077				.15		22	20	42.85	*4
22	27	18.44	— .057				.16		22	27	19.54	5
22	30	57.10	— .065				.16		22	30	58.20	6
22	33	35.08	— .089	—0	01.04		.16		22	33	36.15	7
22	37	47.44	— .099				.17		22	37	48.51	8
22	41	49.04	— .072				.17		22	41	50.14	9
22	43	52.68	— .072				.17		22	43	53.78	10
22	48	54.76	— .041	—0	01.02		.18		22	48	55.90	11
22	51	21.64	— .077				.18		22	51	22.74	12
22	55	50.00	— .081			—0	01.18	—1.21	22	55	51.10	13
22	33	34.50	— .147	—0	01.68	—0	01.54	—0.39	22	33	35.89	14
22	37	46.72	— .110				.54		22	37	48.15	*15
22	44	21.62	— .223				.54		22	44	22.94	16
22	48	54.50	— .322		01.54		.54		22	48	55.72	17
22	51	20.84	— .188				.54		22	51	22.19	18
22	55	49.62	— .176				.54		22	55	50.98	19
22	59	24.64	— .081				.54		22	59	26.10	20
23	02	54.33	+ .655				.54		23	02	56.52	*21
23	06	07.62	— .216				.54		23	06	08.94	22
23	09	40.62	— .229				.55		23	09	41.94	23
23	12	48.84	— .090				.55		23	12	50.30	24
23	17	44.04	— .280				.55		23	17	45.31	*25
23	20	37.93	+ .435				.55		23	20	39.91	26
23	24	59.76	— .281				.55		23	25	01.03	27
23	28	58.90	— .186				.55		23	29	00.26	28
23	31	48.82	— .210	—0	01.81		.35		23	31	50.16	29
23	33	58.34	— .184				.55		23	33	59.71	30
23	39	07.04	— .240				.55		23	39	08.35	31
23	43	10.96	— .272				.56		23	43	12.25	32
23	47	02.36	— .163				.56		23	47	03.76	33
23	51	11.36	— .164			—0	01.56	—0.39	23	51	12.76	34
23	31	48.58	+ .146	—0	01.69	—0	01.97	—0.50	23	31	50.70	35
23	33	58.16	+ .160				.97		23	34	00.29	36
23	39	06.66	+ .209				.97		23	39	08.84	37
23	43	10.52	+ .236				.97		23	43	12.73	38
23	47	01.88	+ .141				.98		23	47	04.00	39
23	51	10.90	+ .143				.98		23	51	13.02	40
23	54	17.72	+ .135				.98		23	54	19.83	41
23	57	13.84	+ .054				.98		23	57	15.87	42
0	00	12.84	+ .054		01.93		.98		0	00	14.87	43
0	05	05.20	+ .110		02.03		.98		0	05	07.29	44
0	09	39.72	+ .160				.98		0	09	41.86	45
0	14	50.26	+ .141				.98		0	14	52.38	46
0	18	27.10	+ .353				.99		0	18	29.44	47
0	21	57.50	+ .180				.99		0	21	59.67	48
0	24	17.78	+ .091				.99		0	24	19.86	49
0	27	25.02	+ .168				.99		0	27	27.18	50
0	31	33.92	— .132	—0	02.03	—0	01.99	—0.50	0	31	35.78	*51

No. 4. ζ Aquarii double; the smaller star of the 6th magnitude.
15, 21, 25, 51. Two stars in the field of the instrument.
25. b^2 Aquarii double; the smaller star of the 8.9 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Sept. 2	β Ceti	2.3	—18°52′	52.5	15.3	0 35 38.2	1.1	24.0
2	cont'd.	δ Piscium	5	+ 6 43	44.5	6.4	0 40 28.2	49.9	11.7
3	4	48 Cassiopeæ	5	+70 08		59.0	1 49 02.8	6 5	
4		Moon II	(19.4)	+17 06	12.0	35.2	1 52 58.1	21.3	44.5
5		α Arietis	3	+22 42	26.7	50.5	1 58 13.7	37.5	1.0
6		15 Arietis	6	+18 45	4.0	27.0	2 01 49.8	12.7	35.6
7		ξ^1 Ceti	5	+ 8 06	51.2	13.2	2 04 35.1	57.0	19.0
8		θ^1 Arietis	6	+19 10	32.0	55.0	2 09 18.0	41.0	3.8
9		70 Ceti	6	— 1 36	23.5	45.2	2 14 07.0	28.7	50.4
10		ρ Ceti	5	—13 00	32.3	54.5	2 18 16.5	38.5	0.8
11		ψ Arietis	6.7	+17 00	20.8	43.6	2 22 06.3	29.0	51.7
12		σ Ceti	5	—15 56	48.5	10.7	2 24 33.3	56.0	18.5
13		ν Arietis	6	+21 16	2.2	25.5	2 29 48.7	11.9	35.1
14		γ Ceti	3	+ 2 34	20.8	42.5	2 35 04.2	26.0	47.7
15		π Arietis	5	+16 48	40.7	3.5	2 40 26.2	48.9	11.5
16	5	α Arietis	3	+22 42	26.2	49.6	1 58 13.2	36.8	0.5
17		15 Arietis	6	+18 45	3.5	26.5	2 01 49.5	12.5	35.4
18		ξ^1 Ceti	5	+ 8 06	50.6	12.5	2 04 34.5	56.4	18.3
19		θ^1 Arietis	6	+19 10	31.5	54.5	2 09 17.4	40.3	3.2
20		70 Ceti	6	— 1 36	22.6	44.4	2 14 06.1	27.8	49.6
21		ρ Ceti	5	—13 00	31.2	53.5	2 18 15.7	38.0	0.2
22		ψ Arietis	6.7	+17 00	20.3	43.0	2 22 05.6	28.3	51.0
23		265 A. S. C.	6.7	+ 6 47	55.5	17.2	2 26 39.0	0.7	22.5
24		d^2 Ceti	6	— 4 05	57.5	19.0	2 29 40.7	2.5	24.5
25		84 Ceti	6	— 1 22	21.5	48.2	2 33 05.0	26.7	48.4
26		γ Ceti	3	+ 2 34	20.0	41.8	2 35 03.5	25.3	47.1
*27		299 A. S. C.	4.5	+55 14	53.0	31.4	2 39 09.0	47.4	25.5
28		τ^2 Eridani	5	—21 40	2 2	25.6	2 43 49.0	12.4	35.7
29		Moon II	(20.5)	+21 28	25.0	48.8	2 47 12.6	36.5	0.5
30		ε Arietis	5	+20 42	21.4	44.5	2 50 07.6	30 7	53.9
*31		α Ceti	2.3	+ 3 28	14.4	31.1	2 53 57.8	19.5	41.3
32		ρ^3 Eridani	6	— 8 13	43.5	5.5	2 56 27.4	49.5	11.3
33		54 Arietis	6.7	+18 11	35.0	57.5	2 59 20.5	43.5	6.5
34		δ Arietis	4	+19 07	46.5	9.5	3 02 32.5	55.5	18.5
35	8	k^1 Eridani	5.6	+ 1 01	33.0	54.7	4 20 16.4	38.0	59.7
36		k^2 Eridani	5.6	— 0 23	58.5	20.2	4 23 41.9	3.6	25.3
37		α Tauri	1	+16 11	0.2	22.7	4 26 45.2	7.9	39.5
*38		σ^2 Tauri	5.6	+15 36	23.2	45.6	4 30 08.2	30.8	53.2
39		P Eridani	6	—24 48	38.6	2.6	4 33 26.5	50.5	14.5
40		552 A. S. C.	4.5	+66 04	29.5	22.8	4 38 16.5	10.0	3.3
41		60 Eridani	6	—16 30	12.6	35.5	4 42 57.9	20.5	3.2
42		o^2 Orionis	5	+13 16	38.5	0.8	4 47 23.0	45.3	7.6
43		β Eridani	3	— 5 17	15.0	36.7	4 59 58.5	20.3	42.0
44		β Orionis	1	— 8 23	6.1	28.1	5 06 50.1	12.1	4.1
45		β Tauri	2	+28 28	22.5	47.1	5 16 11.8	36.5	1.2
46		δ Orionis	2	— 0 25	6.0	27.7	5 23 49.4	11.1	32.8
47		α Columbæ	2	—34 09	6.8	22.9	5 33 49.0	15.1	41.3
48		κ Orionis	3	— 9 44	25.0	47.0	5 40 09.0	31.0	53.0
49		α Orionis	1	+ 7 22	46.4	8.2	5 48 30.1	52.0	13.8
50		Moon II	(23.6)	+26 48	27.5	52.5	5 53 17.4	42.4	7.3

September 4.—Instrumental errors as on the 2d.
5.—Perfectly clear; no change in the adjustments.
8.—No error of collimation or level; observations interrupted by clouds.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
0	35	38.22	+ .232	—0	01.96		01.99	—0.60	0	35	40.44	1
0	40	28.14	+ .187			—0	01.99	—0.50	0	40	30.29	2
1	49	02.78	— .396			—0	03.34	—0.68	1	49	05.72	3
1	52	58.22	+ .101				.34		1	53	01.66	4
1	58	13.88	+ .077	—0	03.20		.34		1	58	17.30	5
2	01	49.82	+ .095				.34		2	01	53.25	6
2	04	35.10	+ .134				.34		2	04	38.57	7
2	09	17.96	+ .093				.35		2	09	21.40	8
2	14	06.96	+ .168				.35		2	14	10.48	9
2	18	16.52	+ .210				.35		2	18	20.08	10
2	22	06.28	+ .101				.35		2	22	09.73	11
2	24	33.40	+ .221				.35		2	24	36.97	12
2	29	48.68	+ .084				.36		2	29	52.12	13
2	35	04.24	+ .146	—0	03.36		.36		2	35	07.75	14
2	40	26.16	+ .104			—0	03.36	—0.68	2	40	29.62	15
1	58	13.26	+ .077	—0	03.94	—0	04.02	—0.71	1	58	17.36	16
2	01	49.48	+ .095				.02		2	01	53.59	17
2	04	34.46	+ .134				.02		2	04	38.61	18
2	09	17.38	+ .093				.03		2	09	21.50	19
2	14	06.10	+ .168				.03		2	14	10.30	20
2	18	15.72	+ .210				.03		2	18	19.96	21
2	22	05.64	+ .101				.03		2	22	09.77	22
2	26	38.98	+ .139				.04		2	26	43.16	23
2	29	40.84	+ .177				.04		2	29	45.06	24
2	33	04.96	+ .168				.04		2	33	09.17	25
2	35	03.54	+ .148		04.09		.04		2	35	07.73	26
2	39	09.26	— .123				.04		2	39	13.18	*27
2	43	48.58	+ .235				.04		2	43	52.85	28
2	47	12.68	+ .088				.05		2	47	16.81	29
2	50	07.62	+ .086				.05		2	50	11.76	30
2	53	57.82	+ .146	—0	04.09		.05		2	54	02.02	*31
2	56	27.44	+ .192				.05		2	56	31.68	32
2	59	20.60	+ .097				.05		2	59	24.75	33
3	02	32.50	+ .093			—0	04.05	—0.71	3	02	36.64	34
4	20	16.36	+ .092			—0	06.42	—0.77	4	20	22.87	35
4	23	41.90	+ .095				.43		4	23	48.42	36
4	26	45.30	+ .060	—0	06.30		.43		4	26	51.79	37
4	30	08.20	+ .061				.43		4	30	14.69	*38
4	33	26.54	+ .148				.43		4	33	33.12	39
4	38	16.42	— .169				.43		4	38	22.68	40
4	42	57.94	+ .129				.44		4	43	04.51	41
4	47	23.04	+ .067				.44		4	47	29.55	42
4	59	58.50	+ .105				.44		5	00	05.04	43
5	06	50.10	+ .111		06.53		.45		5	06	56.66	44
5	16	11.82	+ .031		06.41		.45		5	16	18.30	45
5	23	49.40	+ .085		06.53		.46		5	23	55.94	46
5	33	49.02	+ .174		06.41		.46		5	33	55.65	47
5	40	09.00	+ .114				.46		5	40	15.57	48
5	46	30.10	+ .079	—0	06.66		.47		5	46	36.65	49
5	53	17.42	+ .035			—0	06.47	—0.77	5	53	23.92	50

No. 27, 299 A. S. C. double; the smaller star of the 9th magnitude.
31, 38. Two stars in the field of the instrument.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Sept. 8	μ Geminorum	3	+22°35′	30.0	53.6	6 13 17.1	40.6	4.1
2	18	π Sagittarii	4.5	—21 16			19 00 03.5	26.9	50.0
3		B Aquilæ	5.6	— 8 12	4.1	26.0	19 03 48.0	9.9	31.8
4		1 Sagittæ	6	+20 58	24.2	47.5	19 08 10.6	33.7	57.0
5		υ Sagittarii	5.6	—16 15	36.9	59.7	19 12 22.2	44.8	7.5
6		δ Aquilæ	3.4	+ 2 48	30.2	51.8	19 17 13.4	35.1	56.8
*7		*b* Vulpeculæ	4.5	+24 21	2.0	25.8	19 21 49.6	13.4	37.2
*8		h^2 Sagittarii	4.5	—25 14		23.8	19 26 46.8	10.8	34.9
9		σ Aquilæ	5.6	+ 5 03	21.8	43.6	19 31 05.3	27.1	48.9
10		2310 A. S. C.	6	—15 50	29.2	51.8	19 34 14.3	36.8	59.3
11		γ Aquilæ	3	+10 14	42.5	4.5	19 38 26.5	48.5	10.6
*12		α Aquilæ	1.2	+ 8 27	2.1	24.1	19 42 46.0	8.0	30.0
13		β Aquilæ	3.4	+ 6 01	31.2	53.0	19 47 14.9	36.7	58.5
14		*c* Sagittarii	4.5	—28 09	48.5	13.5	19 52 38.0	2.5	27.1
15		*y* Sagittæ	6	+15 36	13.0	35.6	19 55 58.0	20.4	43.0
16		64 Aquilæ	6	— 1 08	50.5	12.2	19 59 33.9	55.6	17.3
17		18 Vulpeculæ	6	+26 26	51.3	15.5	20 03 39.7	4.0	28.2
*18		α^2 Capricorni	3	—13 02	14.2	36.6	20 08 58.8	21.0	43.2
*19		κ Cephei	4.5	+77 14		11.3	20 13 49.3	27.5	
20		π Capricorni	5	—18 44	12.5	35.1	20 17 57.9	20.8	44.0
21		λ Ursæ Min.	5	+88 50			20 20 00.5		
22	19	B Aquilæ	6	— 8 12	22.2	44.2	19 04 06.1	28.1	50.0
23		1 Sagittæ	6	+20 58	42.1	5.5	19 08 28.7	52.0	15.2
24		υ Sagittarii	5.6	—16 15	55.0	17.7	19 12 40.2	2.8	25.5
25		δ Aquilæ	3.4	+ 2 48	48.2	10.0	19 17 31.7	53.5	15.2
*26		*b* Vulpeculæ	4.5	+24 21	20.1	43.9	19 22 07.7	31.6	55.5
*27		h^2 Sagittarii	4.5	—25 14	16.9	41.0	19 27 05.0	29.0	53.0
28		σ Aquilæ	6	+ 5 03	40.1	1.7	19 31 23.5	45.2	7.0
29		2310 A. S. C.	6	—15 50	47.3	9.7	19 34 32.5	54.8	17.5
30		γ Aquilæ	3	+10 14	0.5	22.6	19 38 44.6	6.6	28.7
*31		α Aquilæ	1.2	+ 8 27	20.3	42.2	19 43 04.1	26.0	48.0
32		β Aquilæ	4	+ 6 01	49.5	11.2	19 47 33.0	54.8	16.6
33		*c* Sagittarii	4.5	—28 09	6.6	31.2	19 52 56.0	20.6	45.2
34		*y* Sagittæ	6	+15 36	31.0	53.6	19 56 16.0	38.5	1.2
35		64 Aquilæ	6	— 1 08	8.7	30.3	19 59 52.0	13.6	35.5
36		18 Vulpeculæ	6	+26 26	9.3	33.5	20 03 57.7	22.0	46.3
*37		α^2 Capricorni	3	—13 02	32.3	54.6	20 09 16.9	39.2	1.5
*38		κ Cephei	4.5	+77 14	50.7	29.5	20 14 07.5	45.7	24.0
39		λ Ursæ Min.	5	+88 50			20 20 22.5		
40		2414 A. S. C.	7	—14 16	38.9	1.3	20 25 23.6	46.0	8.4
41		τ^1 Capricorni	7	—15 41	44.3	6.7	20 28 29.1	51.5	14.0
42		2437 A. S. C.	5.6	—16 42	54.0	16.6	20 31 39.3	2.0	24.7
43	21	κ Ophiuchi	4	+ 9 38	27.5	49.5	16 50 11.5	23.5	55.5
44		η Ophiuchi	2.3	—15 31	34.2	56.7	17 01 19.1	41.5	4.0
45		α Herculis	3.4	+14 35	41.8	4.4	17 07 26.6	49.2	11.5
46		Moon I	(6.7)	—26 54	4.3	29.5	17 21 54.6	19.8	44.9
47		α Ophiuchi	2	+12 44	51.8	14.1	17 27 36.3	58.5	20.7
48		μ Herculis	4	+27 49	27.7	52.3	17 40 16.8	41.3	5.8
49		ν Ophiuchi	4	— 9 45	36.0	58.0	17 50 19.8	41.8	3.8
50		γ^2 Sagitarii	4	—30 29	49.2	14.5	17 55 39.7	4.9	30.0

September 18.—Clear. Adjusted the transit in collimation and level.
19.—Clear. Stopped clock at 11*h.* and shortened the pendulum 1.2 division. No instrumental errors.
2437 A. S. C. is recorded *v Capricorni.*
21.—Cumuli. No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
6	13	17.08	+ .045	—0	06.42	—0	06.48	—0.77	6	13	23.60	1
19	00	03.50	— .140			—0	18.94	—1.00	19	00	22.30	2
19	03	47.96	— .111				.94		19	04	06.79	3
19	08	10.60	— .049				.94		19	08	29.49	4
19	12	22.22	— .128				.95		19	12	41.04	5
19	17	13.46	— .090	—0	18.91		.95		19	17	32.32	6
19	21	49.60	— .041				.95		19	22	08.51	*7
19	26	47.02	— .149				.96		19	27	05.83	*8
19	31	05.34	— .084				.96		19	31	24.22	9
19	34	14.28	— .127				.96		19	34	33.11	10
19	38	26.52	— .073		18.94		.96		19	38	45.41	11
19	42	46.04	— .077		18.99		.97		19	43	04.93	*12
19	47	14.86	— .082		18.93		.97		19	47	33.75	13
19	52	37.92	— .157				.97		19	52	56.73	14
19	55	58.00	— .061				.97		19	56	16.91	15
19	59	33.90	— .096				.98		19	59	52.98	16
20	03	39.74	— .036				.98		20	03	58.68	17
20	08	58.76	— .121		19.09		.98		20	09	17.62	*18
20	13	49.37	+ .421				.99		20	14	08.78	*19
20	17	58.06	— .134				.99		20	18	16.92	20
20	20	00.50	+5.617	—0	19.12	—0	18.99	—1.00	20	20	25.11	21
19	04	06.12				—0	00.75	+0.56	19	04	06.87	22
19	08	28.70					.75		19	08	29.45	23
19	12	40.24					.75		19	12	40.99	24
19	17	31.72		—0	00.54		.74		19	17	32.46	25
19	22	07.76					.74		19	22	08.50	*26
19	27	04.98					.74		19	27	05.72	*27
19	31	23.48					.74		19	31	24.22	28
19	34	32.36					.74		19	34	33.10	29
19	38	44.60			00.77		.74		19	38	45.34	30
19	43	04.12			00.83		.73		19	43	04.85	*31
19	47	33.02			00.67		.73		19	47	33.75	32
19	52	55.92					.73		19	52	56.65	33
19	56	16.06					.73		19	56	16.79	34
19	59	52.02					.73		19	59	52.75	35
20	03	57.76					.73		20	03	58.49	36
20	09	16.90			00.82		.72		20	09	17.62	*37
20	14	07.48					.72		20	14	08.20	*38
20	20	22.50		—0	01.71		.72		20	20	23.22	39
20	25	23.64					.72		20	25	24.36	40
20	28	29.12					.72		20	28	29.84	41
20	31	39.32				—0	00.72	+0.56	20	31	40.04	42
16	50	11.50	+ .073			+0	00.32	+0.56	16	50	11.25	43
17	01	19.10	+ .126				.33		17	01	18.90	44
17	07	26.70	+ .064	+0	00.26		.33		17	07	26.43	45
17	21	54.62	+ .153				.34		17	21	54.43	46
17	27	36.28	+ .068	+0	00.40		.34		17	27	36.01	47
17	40	16.78	+ .032				.34		17	40	16.47	48
17	50	19.88	+ .114				.35		17	50	19.64	49
17	55	39.66	+ .163			+0	00.35	+0.56	17	55	39.47	50

Nos. 8, 9, 18, 26, 27, 37, 38. Two stars in the field of the instrument.

12, 31. The magnitude of the companion to α Aquilæ was not recorded on the 18th; on the 19th it is noted as of the 9th.

19, 38. The smaller star was estimated on the 18th to be of the 7th mag., and on the 19th, of the 9.10 mag.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Sept. 23	λ Sagittarii	4	—25°30′	27.0	51.1	18 18 15.2	39.2	3.2
2		δ Ursæ Min.	3	+86 36			18 23 12.5		
3		σ Sagittarii	3	—26 29	41.7	5.8	18 45 29.9	54.1	18.5
*4	25	α² Capricorni	3	—13 02	36.5	58.8	20 09 21.0	43.2	5.5
*5		β² Capricorni	3.4	—15 17	26.6	49.2	20 12 11.7	34.2	56.6
*6		κ Cephei	4.5	+77 14			20 14 08.6		
7		λ Ursæ Min.	6	+88 50			20 20 12.0		
8		u Capricorni	6	—10 23	4.5	26.6	20 23 48.7	10.8	32.8
9		θ Cephei	4.5	+62 27	25.1	12.0	20 26 59.0	46.0	32.8
10		υ Capricorni	5	—18 42	21.2	44.2	20 31 07.0	29.8	52.9
11		ψ Capricorni	4.5	—25 50	59.8	23.8	20 36 47.9	12.0	36.1
12		λ Delphini	6	+ 5 26	19.1	40.9	20 40 02.6	24.5	46.2
13		19 Capricorni	6	—18 31	10.1	33.0	20 45 55.9	18.8	41.7
14		2482 A. S. C.	6.7	—16 38	8.2	31.0	20 48 53.6	16.2	38.6
15		21 Capricorni	6	—18 09	16.5	39.0	20 52 02.0	25.5	47.8
16		Moon I	(10.8)	—17 21	20.5	44.3	20 52 07.5	30.8	54.0
17		4 Equulei	6	+ 5 20	57.2	19.1	20 57 40.9	2.7	24.5
18		ν Aquarii	5	—12 01	18.5	41.0	21 01 03.0	25.2	47.5
19		ζ Cygni	3	+29 35	27.0	52.2	21 06 17.0	41.8	6.9
20		31 Capricorni	8	—18 07	43.2	6.2	21 09 29.1	52.0	14.8
21		ι Capricorni	5	—17 30	45 3	8.0	21 13 30.7	53.3	16.0
22		ψ² Aquarii	6	—10 25	3.2	25.4	21 16 47.5	9.6	31.7
*23		b Capricorni	5.6	—22 30	59.4	23.0	21 19 46.6	10.2	33.7
24		β Aquarii	3	— 6 46	34.8	56.6	21 23 18.5	40.4	2.2
*25		β Cephei	3	+69 52	34.5	37 8	21 26 40.8	44.2	47.0
26	26	λ Delphini	5.6	+ 5 26	20.0	41.7	20 40 03.5	25.3	47.2
27		19 Capricorni	6	—18 31	10.8	34.0	20 45 56.6	19.8	42.7
28		2482 A. S. C.	6.7	—16 38	9.0	31.8	20 48 54.5	17.4	39.6
*29		K Cephei	5	+56 17	50.5	29.6	20 52 08.5	47.5	26 5
30		4 Equulei	6	+ 5 20	58 2	20.0	20 57 41.7	3.6	25.5
31		ν Aquarii	5	—12 01	19.5	41.8	21 01 04.0	26.1	48.3
32		ζ Cygni	3	+29 35	28.0	52.7	21 06 17.7	42.7	7.6
33		31 Capricorni	8	—18 17	44.2	7 1	21 09 30.0	52.8	15.7
34		ι Capricorni	5	—17 30	46.0	8.8	21 13 31.5	54.3	17 0
35		ψ² Aquarii	6	—10 25	4.2	26.4	21 16 48.5	10.6	32.5
*36		b Capricorni	5.6	—22 30	0.6	24.1	21 19 47.6	11.0	34.5
37		β Aquarii	3	— 6 16	35.0	57.5	21 23 19.4	41.2	3.0
*38		β Cephei	3	—69 52	35.2	38.5	21 26 41.5	44.5	47.5
39		5 Pegasi	5.6	+18 36	41.2	4.0	21 30 26.9	49.8	12.7
40		41 Capricorni	5	—23 56	18.0	41.9	21 33 05.7	29.5	53.3
41		ε Pegasi	2.3	+ 9 09	46.6	8.6	21 36 30.7	52.6	14.5
42		Moon I	(11 8)	—12 36	26.5	49.5	21 39 12.3	35.0	57.8
43		μ Capricorni	5	—14 18	1.0	23.2	21 44 45.5	8.0	30.5
44		17 Pegasi	6	+11 20	35.0	57.1	21 49 19.2	41.4	3.5
*45		x Aquarii	8	—17 43	7.1	29.8	21 53 52.5	15.4	38.1
46		ι Aquarii	4.5	—14 38	14.5	36.8	21 57 59.0	21.4	43.8
47	27	ε Pegasi	2.3	+ 9 09	47.3	9.5	21 36 31.6	53.5	15.6
48		μ Capricorni	5	—14 18	1.7	24.0	21 44 46.5	9.0	31.3
49		17 Pegasi	6	+11 20	35.7	58.0	21 49 20.0	42.2	4.2
*50		x Aquarii	8	—17 43	7.8	30.5	21 53 53.3	16.1	49.0

September 23.—Observations interrupted by clouds.
25.—The instrumental adjustments were examined ☽ ☌ 21 Capricorni.
27.—No error of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
18	18	15.14	— .630			+0	01.24	+0.90	18	18	13.27	1
18	23	12.50	+7 838	+0	01.22		.24		18	23	19.10	2
18	45	30.00	— .640			+0	01.26	+0.90	18	45	28.10	3
20	09	21.00	— .209	+0	03.14	+0	03.09	+0.85	20	09	17.70	*4
20	12	11.66	— .218				.09		20	12	08.35	*5
20	14	08.60	+ .730				.09		20	14	06.24	*6
20	20	12.00	+9.847		03.40		.10		20	20	18.75	7
20	23	48.68	— .200				.10		20	23	45.38	8
20	26	58.98	+ .225				.10		20	26	56.10	9
20	31	07.02	— .232				.10		20	31	03.69	10
20	36	47.92	— .261				.11		20	36	44.55	11
20	40	02.66	— .144				.11		20	39	59.41	12
20	45	55.90	— .231				.11		20	45	52.56	13
20	48	53.56	— .224				.11		20	48	50.23	14
20	52	02.16	— .229				.11		20	51	58.82	15
20	52	07.42	— .226				.12		20	52	04.07	16
20	57	40 88	— .144				.12		20	57	37.62	17
21	01	03.04	— .206				.12		21	00	59.71	18
21	06	16.98	— .049		03.17		.12		21	06	13.81	19
21	09	29.06	— .229				.13		21	09	25.70	20
21	13	30.66	— .227				.13		21	13	27.30	21
21	16	47.48	— .200				.13		21	16	44.15	22
21	19	46.58	— .247				.13		21	19	43.20	*23
21	23	18.50	— .185		03.11		.13		21	23	15.19	24
21	26	40.86	+ .194	+0	03.37	+0	03.14	+0.85	21	26	37.91	*25
20	40	03.54	— .044			+0	03.92	+0.80	20	39	59.58	26
20	45	56.78	— .071				.92		20	45	52.79	27
20	48	54.46	— .069				.93		20	48	50.46	28
20	52	08.50	+ .043				.93		20	52	04.61	*29
20	57	41.80	— .044				.93		20	57	37.83	30
21	01	03.94	— .063				.93		21	00	59.95	31
21	06	17.74	— .015	+0	03.85		.94		21	06	13.79	32
21	09	29.97	— .071				.94		21	09	25.96	33
21	13	31.52	— .070				.94		21	13	27.51	34
21	16	48.44	— .062				.94		21	16	44.44	35
21	19	47.56	— .076				.94		21	19	43.54	*36
21	23	19.22	— .057		03.96		.95		21	23	15.21	37
21	26	41.44	+ .119		03.92		.95		21	26	37.61	*38
21	30	26.92	— .029				.95		21	30	22.94	39
21	33	05.68	— .076				.95		21	33	01.65	40
21	36	30.60	— .040	+0	04.03		.95		21	36	26.61	41
21	39	12.22	— .064				.95		21	39	08.21	42
21	44	45.64	— .066				.90		21	44	41.61	43
21	49	19.24	— .038				.96		21	49	15.24	44
21	53	52.58	— .070				.96		21	53	48.55	*45
21	57	59.10	— .066			+0	03.96	+0.80	21	57	55.07	46
21	36	31.50	— .156	+0	04.81	+0	04.75	+0.82	21	36	26.59	47
21	44	46.50	— .256				.75		21	44	41.49	48
21	49	20.02	— .146				.75		21	49	15.12	49
21	53	53.34	— .272			+0	04.76	+0.82	21	53	48.31	*50

Nos. 4, 5, 6, 23, 29, 36. Two stars in the field of the instrument.

6. κ Cephei double; the small star of the 9th magnitude.

25, 38. β Cephei double; the small star of the 8.9 magnitude.

45, 50. *x* Aquarii double; the stars of equal magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Sept. 27	ι Aquarii	4.5	—14°38′	15.0	37.5	21 58 00.0	22.5	44.8
2	cont'd.	36 Aquarii	7.8	— 8 58	27.5	49.3	22 01 11.2	33.2	55.2
•3		F Aquarii	6	—21 52	53.2	16.6	22 05 40.0	3.5	27.0
4		θ Aquarii	4.5	— 8 34	51.6	13.6	22 08 35.5	57.5	19.5
5		ρ Aquarii	6	— 8 37	15.0	37.0	22 11 58.9	20.9	42.8
6		2669 A. S. C.	6.7	— 8 00	37.0	58.9	22 15 20.8	42.6	4.5
7		H² Pegasi	5.6	+ 3 54	14.3	46.0	22 19 57.8	19.5	41.2
8		σ Aquarii	5.6	—11 29	38.5	1.0	22 22 23.0	45.0	7.3
9		Moon I	(12.9)	— 7 15	16.8	39.2	22 25 01.3	23.6	46.0
10		η Aquarii	4	— 0 56	36.8	58.5	22 27 20.2	41.9	3.6
11		64 Aquarii	7.8	—10 51	18.8	40.9	22 31 03.0	25.1	47.2
12		ζ Pegasi	3	+10 00	57.0	19.0	22 33 41.0	3.0	25.0
13		45 Pegasi	7	+18 32	7.5	30.5	22 37 53.2	16.2	39.1
14		τ² Aquarii	4.5	—14 26	34.8	57.0	22 41 19.4	41.8	4.2
15		λ Aquarii	4	— 8 25	44.5	6.5	22 44 28.3	50.2	12.0
16		α Piscis Aust.	1	—30 28	10.5	35.7	22 49 01.5	26.2	51.2
17		2747 A. S. C.	7	+ 2 10	2.5	29.3	22 52 46.0	7.8	29.5
18		α Pegasi	2	+14 21	15.0	37.5	22 56 59.7	23.0	49.5
19	30	26 Piscium	6	+ 6 11	27.6	49.3	23 47 11.1	33.0	54.8
20		2866 A. S. C.	7	— 6 47	58.9	20.8	23 51 42.6	4.5	26.4
21		r Piscium	4.5	— 6 54	16 0	37.9	23 58 59.8	21.7	43.5
22		α Andromedæ	1	+28 13	32.0	57.6	0 00 22.2	47.8	11.5
23		γ Pegasi	2.3	+14 18	29.6	52.2	0 05 14.5	36.8	59.2
•24		36 Piscium	6.7	+ 7 21	51.7	13.6	0 08 35.5	57.5	19.4
25		*d* Piscium	5.6	+ 7 18	52.5	14.5	0 12 36.5	58.5	20.4
26		9 Ceti	6	—13 06	9.7	32.0	0 14 54.3	16.6	38.8
27		α Phœnicis	2	—43 10	37.0	7.1	0 18 36.8	6.5	36.4
28		38 A. S. C.	6	—24 40	49.1	13.0	0 22 36.9	0.9	24.7
29		13 Ceti	6	— 4 28	31.7	53.5	0 27 15.3	37.2	59.0
30		α Cassiopeæ	3	+55 40	26.5	5.0	0 31 43.4	21.9	0.2
31		β Ceti	2.3	—18 51	1.9	25.0	0 35 47.9	10.8	33.7
32		ζ Andromedæ	5	+23 24	19.5	43.0	0 39 06.6	30.4	54.1
33		φ² Ceti	6	—11 30	37.0	59.0	0 42 21.0	43.0	5.3
34		Moon II	(16.0)	+ 9 58	25.9	48.3	0 46 10.6	33.0	55.4
35		φ⁴ Ceti	6	—12 14	13.0	35.3	0 50 57.5	19.8	42.0
•36		ε Piscium	4	+ 7 02	9.3	31.2	0 54 53.1	15.0	36.9
37		27 Ceti	6	—10 50	6.0	28.1	0 57 50.3	12.5	34.6
38		α Ursæ Min.	2.3	+88 28			1 03 17.5		
39	Oct. 1	φ⁴ Ceti	6	—12 14	14.8	37.0	0 50 59.2	21.5	43.6
•40		ε Piscium	4	+ 7 02	11.0	32.9	0 54 54.8	16.6	38.5
•41		27 Ceti	6	—10 50	7.6	29 8	0 57 51.9	14.1	36.2
•42		η Ceti	3.4	—11 00	4.3	26.3	1 00 48.5	10.5	32.6
43		α Ursæ Min.	2.8	+88 28			1 03 21.5		
44		38 Ceti	6	— 1 50	11.8	33.5	1 06 55.2	17.0	38.7
45		υ Piscium	5.6	+26 26	9.0	33.3	1 10 57.6	21.8	46.0
46		144 A. S. C.	7	+ 0 54	55.5	17.2	1 14 38.8	0.5	22.2
•47		θ¹ Ceti	3	— 9 00	33.3	55.3	1 16 17.4	39.5	1.5
•48		157 A. S. C.	7	+16 15	19.3	41.5	1 20 04.6	27.0	49.8
49		η Piscium	4	+14 32	27.2	49.5	1 23 11.8	34.3	56.7
50		Moon II	(17.0)	+15 24			1 36 27.6		

September 30.—Collimation and level undisturbed.
October 1.—The clock was stopped and pendulum lengthened 0.3 division. Observations interrupted by clouds
157 A. S. C. (No. 48) is recorded 1*h*. 19*m*. at transit over middle wire.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
21	57	59.96	— .249			+0	04.76	+0.82	21	57	54.95	1
22	01	11.28	— .225				.76		22	01	06.30	2
22	05	40.66	— .282				.76		22	05	35.62	*3
22	08	35.54	— .223				.77		22	08	30.55	4
22	11	58.92	— .224				.77		22	11	53.93	5
22	15	20.76	— .221				.77		22	15	15.77	6
22	19	57.76	— .172				.77		22	19	52.82	7
22	22	22.96	— .236				.77		22	22	17.95	8
22	25	01.38	— .218				.77		22	24	56.39	9
22	27	20.20	— .192				.78		22	27	15.23	10
22	31	03.00	— .233				.78		22	30	57.99	11
22	33	41.00	— .147	+0	04.80		.78		22	33	36.07	12
22	37	53.30	— .110				.78		22	37	48.41	13
22	41	19.44	— .249				.78		22	41	14.41	14
22	44	28.30	— .223				.79		22	44	23.29	15
22	49	00.92	— .326		04.78		.79		22	48	55.80	16
22	52	46.02	— .179				.79		22	52	41.05	17
22	56	59.74	— .128	+0	04.78	+0	04.79	+0.82	22	56	54.82	18
23	47	11.16	— .098			+0	06.98	+1.43	23	47	04.08	19
23	51	42.64	— .130				.98		23	51	35.53	20
23	53	59.78	— .128				.98		23	53	52.67	21
0	00	22.22	— .038	+0	07.10		.99		0	00	15.19	22
0	05	14.46	— .077		06.78		.99		0	05	07.39	23
0	08	35.54	— .095				07.00		0	08	28.45	*24
0	12	36.48	— .095				.00		0	12	29.39	25
0	14	54.28	— .145				.00		0	14	47.14	26
0	18	36.76	— .244				.01		0	18	29.51	27
0	22	36.92	— .177				.01		0	22	29.73	28
0	27	15.34	— .124				.02		0	27	08.20	29
0	31	43.40	+ .092		07.17		.02		0	31	36.47	30
0	35	47.86	— .161		06.93		.02		0	35	40.68	31
0	39	06.72	— .051				.03		0	38	59.64	32
0	42	21.06	— .141				.03		0	42	13.89	33
0	46	10.64	— .088				.03		0	46	03.52	34
0	50	57.52	— .143				.04		0	50	50.34	35
0	54	53.10	— .093				.04		0	54	45.97	*36
0	57	50.30	— .144				.05		0	57	43.11	37
1	03	17.50	+4.641	+0	07.12	+0	07.05	+1.43	1	08	15.09	38
0	50	59.22	— .095			+0	08.32	+1.30	0	50	50.81	39
0	54	54.76	— .064				.32		0	54	46.38	*40
0	57	51.92	— .093				.33		0	57	43.50	*41
1	00	48.44	— .093				.33		1	00	40.02	*42
1	03	21.50	+3.414	+0	08.76		.33		1	03	16.58	43
1	06	55.24	— .078				.34		1	06	46.82	44
1	10	57.54	— .029				.34		1	10	49.17	45
1	14	38.84	— .074				.34		1	14	30.43	46
1	16	17.40	— .090	+0	08.30		.34		1	16	08.97	*47
1	20	04.44	— .048				.35		1	19	56.04	*48
1	23	11.90	— .051				.35		1	23	03.50	49
1	36	27.60	— .049			+0	08.36	+1.30	1	36	19.19	50

No. 3. F Aquarii double; the small star of the 8th magnitude.
24, 36, 40, 41, 42, 47. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 3	τ^2 Eridani	4.5	—21°39′	14.1	37.6	2 44 01.0	24.4	47.8
2		ρ^3 Arietis	6	+17 28	54.5	17.2	2 47 40.0	2.8	25.5
3		ε Arietis	5	+20 42	33.2	56.4	2 50 19.6	42.8	6.0
*4		α Ceti	2.3	+ 3 28	26.4	48.0	2 54 09.8	31.6	53.2
5		53 Arietis	6.7	+17 16	55.5	18.2	2 58 40.9	3.5	26.3
6		δ Arietis	4.5	+19 07	58.5	21.5	3 02 44.5	7.5	30.5
*7		ζ Eridani	4	— 9 25	34.0	56.0	3 08 18.0	40.0	2.0
8		16 Eridani	3.4	—22 20	51.0	14.5	3 12 37.9	1.4	24.8
9		ο Tauri	4.5	+ 8 28	43.3	5.5	3 16 27.3	49.2	11.1
10		s Tauri	6	+10 47	10.6	32.8	3 21 55.0	17.1	39.0
11		ε Eridani	4	—10 00	53.5	15.5	3 25 37.6	59.6	21.5
12		Moon II	(19.1)	+23 47	10.9	35.5	3 27 59.6	23.7	48.2
13		12 Tauri	6	+ 2 32	2.1	24.0	3 31 45.8	7.5	29.2
*14		b Pleiadum	4.5	+23 37	51.0	14.6	3 35 38.3	2.0	25.6
*15		η Tauri	3	+23 37	27.0	50.6	3 38 14.3	38.0	1.7
*16		f Pleiadum	5	+23 34	7.4	31.0	3 39 54.7	18.5	42.2
17		u^2 Tauri	6	+ 6 03	59.5	21.3	3 43 43.1	5.0	26.8
18		l Eridani	5.6	—25 05	19.7	43.6	3 47 07.5	31.5	55.5
19		γ^1 Eridani	2.3	—13 57	2.8	25.3	3 50 47.5	9.7	32.0
*20		A^1 Tauri	5	+21 39	43.0	6.5	3 55 29.9	53.4	16.8
*21	4	b Pleiadum	4.5	+23 37	50.5	14.1	3 35 37.8	1.5	25.1
*22		η Tauri	3	+23 37	26.1	49.9	3 38 13.5	37.1	0.8
*23		f Pleiadum	5	+23 34	6.7	30.4	3 39 54.0	17.7	41.5
24		u^2 Tauri	6.7	+ 6 03	58.9	20.6	3 43 42.4	4.3	26.1
25		l Eridani	5.6	—25 05	18.8	42.7	3 47 06.5	30.5	54.5
26		γ^1 Eridani	2.3	—13 57	2.0	24.5	3 50 46.8	9.1	31.5
*27		A^1 Tauri	5	+21 39	42.8	5.7	3 55 28.9	52.3	15.6
28		37 Eridani	5.6	— 7 20	3.5	25.5	4 02 47.4	9.3	31.2
29		48 Tauri	6.7	+15 00	10.6	33.0	4 06 55.5	18.0	40.5
*30		χ Tauri	6	+25 15	18.0	42.0	4 13 06.0	30.0	54.0
*31		71 Tauri	5.6	+15 15	43.1	5.7	4 17 28.2	50.7	13.2
*32		80 Tauri	6	+15 17	30.5	53.0	4 21 15.5	38.0	0.5
33		α Tauri	1	+16 11	13.5	36.2	4 26 58.7	21.3	43.9
34		Moon II	(20.1)	+26 07	40.3	5.3	4 29 30.2	55.1	20.0
*35		τ Tauri	5	+22 39	6.2	29.8	4 32 53.2	16.6	40.2
36		β Cœli Sculp.	5	—37 27	40.9	8.0	4 36 35.7	2.7	30.2
37		58 Eridani	6	—17 13	52.1	15.0	4 40 37.8	0.6	23.2
38		b Camelop.	5.6	+53 30	32.5	9.6	4 44 46.1	22.6	59.0
39		b Eridani	6	— 5 25	0.8	22.5	4 48 44.3	6.0	27.8
40		ι Tauri	5	+21 21	0.0	23.4	4 53 46.7	10.0	33.0
*41	5	τ Tauri	5	+22 39	5.5	29.0	4 32 52.5	15.9	39.5
42		β Cœli Sculp.	5	—37 27	40.0	7.5	4 36 34.8	2.2	29.6
43		58 Eridani	6	—17 13	51.5	14.3	4 40 37.0	59.8	22.5
44		b Camelop.	5	+53 30	32.2	8.7	4 44 45.2	21.7	58.1
*45		b Eridani	6	— 5 25	0.0	21.7	4 48 43.5	5.3	27.1
46		ι Tauri	5	+21 21	59.0	22.3	4 53 45.6	8.9	32.2
47		l^1 Tauri	6	+20 12	47.5	10.7	4 58 34.0	57.2	20.2
*48		ε Ursæ Min.	4	+82 17			5 02 25.5		
*49		β Orionis	1	— 8 23	18.8	40.8	5 07 02.6	24.5	46.5
*50		21 Orionis	6	+ 2 26	19.4	41.0	5 11 02.7	24.5	46.2
51		β Tauri	2	+28 28	35.3	59.8	5 16 24.3	49.0	13.8

October 3.—The instrumental errors were examined.
5.—Adjustments unchanged since 3d.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
2	44	00.98	+ .253			+0	07.21	—0.80	2	43	54.02	1
2	47	40.00	+ .104				.21		2	47	32.89	2
2	50	19.60	+ .090				.21		2	50	12.48	3
2	54	09.80	+ .156	+0	07.26		.20		2	54	02.76	*4
2	58	40.88	+ .102				.20		2	58	33.78	5
3	02	44.50	+ .096				.20		3	02	37.40	6
3	08	18.00	+ .204				.20		3	08	11.00	*7
3	12	37.92	+ .256				.19		3	12	30.99	8
3	16	27.28	+ .138				.19		3	16	20 23	9
3	21	54.90	+ .129				.19		3	21	47.84	10
3	25	37.54	+ .206				.19		3	25	30.56	11
3	27	59.58	+ .077				.18		3	27	52.48	12
3	31	45.72	+ .160				.18		3	31	38.70	13
3	35	38.30	+ .077				.18		3	35	31.20	*14
3	38	14.32	+ .077		07.20		.18		3	38	07.22	*15
3	39	54.76	+ .077				.18		3	39	47.66	*16
3	43	43.14	+ .147				.18		3	43	36.11	17
3	47	07.56	+ .267				.17		3	47	00.66	18
3	50	47.46	+ .222	+0	07.08		.17		3	50	40.51	19
3	55	29 92	+ .251			+0	07.17	—0.80	3	55	23.00	*20
3	35	37.80	+ .077			+0	06.39	—0.74	3	35	31.49	*21
3	38	13.48	+ .077	+0	06.34		.39		3	38	07.17	*22
3	39	54.06	+ .077				.39		3	39	47.75	*23
3	43	42.46	+ .147				.39		3	43	36.22	24
3	47	06.60	+ .267				.39		3	47	00.48	25
3	50	46.78	+ .222		06.40		.39		3	50	40.61	26
3	55	28.96	+ .251				.38		3	55	22.83	*27
4	02	47.38	+ .196				.38		4	02	41.20	28
4	06	55.52	+ .113				.38		4	06	49.25	29
4	13	06.00	+ .070				.38		4	12	59.69	*30
4	17	28.18	+ .112				.37		4	17	21.92	*31
4	21	15.50	+ .112				.37		4	21	09.24	*32
4	26	58.72	+ .111	+0	06.41		.37		4	26	52.46	33
4	29	30.18	+ .066				.37		4	29	23.88	34
4	32	53.20	+ .081				.37		4	32	46.91	*35
4	36	35.50	+ .330				.37		4	36	29.46	36
4	40	37.74	+ .235				.36		4	40	31.61	37
4	44	45.96	— .114				.36		4	44	39.49	38
4	48	44.28	+ .189				.36		4	48	38.11	39
4	53	46.62	+ .087			+0	06.36	—0.74	4	53	40.35	40
4	32	52.48	+ .082			+0	05.37	—0.80	4	32	47.19	*41
4	36	34.82	+ .330				.37		4	36	29.78	42
4	40	37.02	+ .285				.37		4	40	31.88	43
4	44	45.18	— .114				.36		4	44	39.71	44
4	48	43.52	+ .189				.36		4	48	38.35	*45
4	53	45.60	+ .087				.36		4	53	40.33	46
4	58	33.92	+ .092				.36		4	58	28.65	47
5	02	25.50	+1.721	+0	08.85		.36		17	02	21.86	*48
5	07	02.64	+ .200		05.33		.36		5	06	57.48	*49
5	11	02.76	+ .160				.35		5	10	57.57	*50
5	16	24.44	+ .055	+0	05.31	+0	05.35	—0.80	5	16	19.14	51

Nos. 4, 7, 14, 16, 20, 21, 27, 31, 32, 35, 41, 45, 49, 50. Two stars in the field of the instrument.
15, 22. Seven stars in the field.
23. Three stars in the field.
30. χ Tauri double; the small star of the 9th magnitude.
48. ε Ursæ Minoris, sub-polo.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Oct. 5	658 A. S. C.	6.7	—12°02′	4.6	27.0	5 19 49.1	11.2	33.5
*2	cont'd.	δ Orionis	2	— 0 25	18.5	40.2	5 24 01.9	23.6	45.3
3		α Leporis	3.4	—17 56	6.0	28.8	5 25 51.6	14.4	37.2
4		ε Orionis	2.3	— 1 18	34.3	56.0	5 28 17.7	39.5	1.1
5		Moon II	(21.1)	+26 45	41.1	6.0	5 33 30.9	56.0	20.9
6		N Tauri	6	+17 40	33.8	56.5	5 38 19.3	42.2	5.0
7		C Tauri	5	+27 34	41.0	5.5	5 43 29.9	54.3	18 8
8		α Orionis	1	+ 7 22	59.0	20.9	5 46 42.8	4.6	26.5
9		B Orionis	6	+ 0 32	4.5	26.2	5 50 47.8	9.5	31.0
10		8 Monocerotis	5.6	—10 36	46.0	8.0	5 54 30.1	52.2	14.4
11		ν Orionis	5	+14 47	54.0	16.5	5 58 38.8	1.3	23.7
12		α Lyncis	5	+61 33	55.5	41.0	6 03 26.5	12.0	57.6
13		α Monocerotis	4.5	— 6 14	30.8	52.6	6 07 14.5	36.5	38.3
14		μ Geminorum	3	+22 35	42 6	6.5	6 13 29.8	53.3	16.5
15	6	α Orionis	1	+ 7 22	58.4	20.2	5 46 42.0	3.8	25.8
16		B Orionis	6	+ 0 32	3.7	25.5	5 50 47.2	8.9	30.6
17		3 Monocerotis	5.6	—10 36	45.2	7.3	5 54 29.4	51.5	13.7
18		ν Orionis	5	+14 47	53.2	15.5	5 58 38.0	0.5	23.0
19		α Lyncis	5	+61 33	54.5	40.1	6 03 25.8	11.5	57.1
20		α Monocerotis	4.5	— 6 14	30.1	52.0	6 07 13.8	35.7	57.5
21		μ Geminorum	3	+22 35	42.2	5.6	6 13 28.9	52.3	15.8
*22		z Aurigæ	6	+30 35	39.3	4.6	6 18 29.6	54.6	20.1
*23		δ Ursæ Min.	3	+86 36			6 23 19.5		
24		51 (Hev.) Cephei	5	+87 15			6 24 30.7		
25		γ Geminorum	3	+16 32	54.3	17.0	6 28 39.5	2.0	24.7
26		ε Geminorum	3	+25 17	29.2	53.3	6 34 17.2	41.3	5.2
27		Moon II	(22.2)	+25 32	13.5	38.1	6 38 02.7	27.4	52.3
28		35 Geminorum	6	+13 36	50.2	12.5	6 41 34.7	57.0	19.3
*29		e¹ Geminorum	5.6	+13 22	3.5	26.0	6 45 48.2	10.5	32.8
30		ι Canis Maj.	5	—16 51	24.5	47.2	6 49 10.0	32.8	55.3
31		ε Canis Maj.	2.3	—28 45	49.0	4.8	6 52 29.5	54.2	19.0
32		γ Canis Maj.	5.6	—15 24	56.0	18.5	6 56 41.0	3.5	26.0
33		δ Canis Maj.	3.4	—26 08	14.0	38.0	7 02 02.3	26.6	50.8
34		δ Geminorum	3.4	+22 16	58.7	22.1	7 10 45.5	9.0	32.5
35	14	ψ Capricorni	4.5	—25 50	1.3	25.4	20 36 49.4	13.5	37.6
36		λ Delphini	5.6	+ 5 26	20.8	42.3	20 40 04.2	26.1	48.0
37		19 Capricorni	6	—18 31	11.6	34.5	20 45 57.5	20.4	43.3
38		2482 A. S. C.	6.7	—16 38	9.6	32.5	20 48 55.2	17.8	40.5
*39		K Cephei	6	+56 17	51.0	30.2	20 52 09.2	48.5	27.7
40		4 Equulei	6	+ 5 20	59.0	20.8	20 57 42.5	4.2	26.0
41		ν Aquarii	5	—12 01	20.3	42.5	21 01 04.7	26.9	49.0
42		ζ Cygni	3	+29 35	39.0	53.6	21 06 18.6	43.7	8 5
43		31 Capricorni	8	—18 07	45.0	7.6	21 09 30.4	53.5	16.2
44		ι Capricorni	5	—17 30	46.5	9.5	21 13 32.3	55.1	17.8
45		ψ² Aquarii	6	—10 25	5.0	27.0	21 16 49.0	11.0	33.0
46		b Capricorni	5.6	—22 30	1.0	24.6	21 19 48.2	11.8	35.3
47		β Aquarii	3	— 6 16	36.2	58.1	21 23 20.0	41.8	3.6
*48		β Cephei	3	+69 52	36.0	38.9	21 26 41.8	45.0	48.2
49		5 Pegasi	6	+18 36	42.0	5.0	21 30 27.7	50.8	13.8
50		41 Capricorni	5.6	—23 56	18.5	42.5	21 33 06.3	30.1	54.0
51		ε Pegasi	3	+ 9 09	47.5	9.5	21 36 31.4	53.5	15.3

October 6.—Error of collimation +0s.20, azimuth +0s.15. ☽ ☌ ε Geminorum. The pendulum was shortened one division.

14.—The instrumental errors were adjusted.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
5	19	49.08	+ .214			+0	05.35	—0.80	5	19	43.94	1
5	24	01.90	+ .172	+0	05.28		.35		5	23	56.72	*2
5	25	51.60	+ .238		05.40		.35		5	25	46.49	3
5	28	17.72	+ .175		05.40		.34		5	28	12.55	4
5	33	30.98	+ .063				.34		5	33	25.70	5
5	38	19.36	+ .102				.34		5	38	14.12	6
5	43	29.90	+ .059				.34		5	43	24.62	7
5	46	42.76	+ .143		05.25		.33		5	46	37.57	8
5	50	47.80	+ .167				.33		5	50	42.64	9
5	54	30.14	+ .208				.33		5	54	25.02	10
5	58	38.86	+ .115				.33		5	58	33.64	11
6	03	26.52	— .218				.33		6	03	20.97	12
6	07	14.54	+ .192				.32		6	07	09.41	13
6	13	29.74	+ .082	+0	05.41	+0	05.32	—0.80	6	13	24.50	14
5	46	42.04	+ .280	+0	04.64	+0	04.73	—0.62	5	46	37.59	15
5	50	47.18	+ .293				.73		5	50	42.74	16
5	54	29.42	+ .319				.73		5	54	25.01	17
5	58	38.04	+ .270				.73		5	58	33.58	18
6	03	25.80	+ .299				.73		6	03	21.37	19
6	07	13.82	+ .308				.72		6	07	09.41	20
6	13	28.96	+ .258		04.76		.72		6	13	24.60	21
6	18	29.64	+ .257				.72		6	18	25.18	*22
6	23	19.50	—5.234		00.72		.72		18	23	09.55	*23
6	24	30.70	+6.520		04.48		.72		6	24	32.50	24
6	28	39.50	+ .268				.71		6	28	35.06	25
6	34	17.24	+ .260				.71		6	34	12.79	26
6	38	02.80	+ .260				.71		6	37	58.35	27
6	41	34.74	+ .271				.71		6	41	30.30	28
6	45	48.20	+ .327				.71		6	45	43.82	*29
6	49	09.96	+ .338				.71		6	49	05.59	30
6	52	29.50	+ .385		04.72		.70		6	52	25.18	31
6	56	41.00	+ .338				.70		6	56	36.63	32
7	02	02.34	+ .374				.70		7	01	58.01	33
7	10	45.56	+ .260	+0	04.73	+0	04.70	—0.62	7	10	41.12	34
20	36	49.44				+0	05.05	+0.06	20	36	44.39	35
20	40	04.28					.05		20	39	59.23	36
20	45	57.46					.05		20	45	52.41	37
20	48	55.12					.05		20	48	50.07	38
20	52	09.32					.05		20	52	04.27	*39
20	57	42.50					.05		20	57	37.45	40
21	01	04.68					.05		21	00	59.63	41
21	06	18.68		+0	05.23		.05		21	06	13.63	42
21	09	30.54					.05		21	09	25.49	43
21	13	32.24					.05		21	13	27.19	44
21	16	49.00					.05		21	16	43.95	45
21	19	48.18					.05		21	19	43.13	46
21	23	19.94			04.94		.05		21	23	14.89	47
21	26	41.98			05.20		.05		21	26	36.93	*48
21	30	27.86					.05		21	30	22.81	49
21	33	06.28					.05		21	33	01.23	50
21	36	31.44		+0	05.09	+0	05.05	+0.06	21	36	26.39	51

Nos. 2, 22, 39. Two stars in the field of the instrument.
23. δ Ursæ Minoris, sub-polo.
29. ε^{1} Geminorum double; the smaller star of the 8th magnitude.
48. β Cephei double; the smaller star of the 9th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 14	ζ Pegasi	3	+10°00′	57.0	19.1	22 33 41.1	3.2	25.2
*2	cont'd.	45 Pegasi	6	+18 32	7.7	30.5	22 37 53.4	16.5	39.5
3		τ² Aquarii	5	—14 26	34.6	57.0	22 41 19.5	42.0	4.5
4		λ Aquarii	4	— 8 25	44.6	6.5	22 44 28.5	50.5	12.5
5		α Piscis Aust.	1	—30 28	10.3	35.5	22 49 00.8	26 0	51.2
*6		α Ursæ Maj.	1.2	+62 36	25.2	12.5	22 53 59.5	46.5	34.0
7		α Pegasi	2	+14 21	14.6	37.1	22 56 59.5	22.0	44.4
8	17	υ Capricorni	5	—18 42	22.6	45.5	20 31 08.5	31.5	54.5
9		ψ Capricorni	4.5	—25 50	1.5	25.5	20 36 49.6	13.8	38.0
10		19 Capricorni	6	—18 31	11.7	34.6	20 45 57.5	20.5	43.5
11		2482 A. S. C.	6.7	—16 38	10.0	32.5	20 48 55.3	18.0	40.5
*12		K Cephei	6	+56 17	51.0	30.0	20 52 09.0	48.3	27.3
13		4 Equulei	6	+ 5 20	59.0	20.9	20 57 42.6	4.4	26.3
14		ν Aquarii	5	—12 01	20.3	42.5	21 01 04.7	27.0	49.2
15		ζ Cygni	3	+29 35	29.0	54.0	21 06 18.9	43.8	8 7
16		31 Capricorni	8	—18 07	44.8	7.6	21 09 30.6	53.5	16.5
17		ι Capricorni	5	—17 30	46.6	9.6	21 13 32.5	55.3	18.1
18		ψ² Aquarii	6	—10 25	5.0	27.0	21 16 49.2	11.5	33.4
*19		δ Capricorni	5.6	—22 30	1.3	24.5	21 19 48.3	12.0	35.4
20		β Aquarii	3	— 6 16	36.5	58.5	21 23 20.3	42.1	4.0
*21		β Cephei	3	+69 52	35.0	38.5	21 26 41.7	44.9	48.4
22		5 Pegasi	6	+18 36	42.0	5.0	21 30 28.0	51.0	14.0
23		ε Pegasi	2 3	+ 9 09	47.6	9.5	21 36 31.5	53.5	15.5
24	18	α Scorpii	1	—26 04	59.5	23.7	16 19 47.8	12.0	36.2
25		β Herculis	2.3	+21 50	43.8	7.2	16 23 30 5	53.8	17.2
26		ζ Ophiuchi	3.4	—10 14	48.1	10.2	16 28 32.3	34.3	16.0
27		ε Scorpii	3	—35 00	8.2	34.5	16 40 00.5	26.5	52.8
28		ι Ophiuchi	4	+10 26		14.6	16 46 36.6	58.6	
29		Moon I	(4.1)	—26 29	24.3	49.6	16 57 14.5	39.6	4.8
30		η Ophiuchi	2.3	+15 31	38.5	1.0	17 01 23.5	45.9	8.5
31		ζ Draconis	3	+65 55	38.0	31.3	17 08 24.6	17.9	11.1
32	20	ο Herculis	4	+28 45	38.5	3.1	18 01 27.8	52.5	17.2
33		ο Aquilæ	5	— 9 12	58.2	20.1	18 33 42.1	4.1	26.1
34		Moon I	(6.2)	—24 59	56.5	21.5	18 49 45.8	10.8	35.3
35		ε Aquilæ	3.4	+14 51	47.5	10.0	18 52 32.5	55.0	17.5
36		π Sagittarii	4.5	—21 16	40.2	3.5	19 00 26.7	50.0	13.3
37		d Sagittarii	5	—19 14	42.2	5.5	19 08 28.1	51.2	14.3
38		υ Sagittarii	5.6	—16 15	0.5	23.0	19 12 46.5	8.0	30.5
39		δ Aquilæ	3.4	+ 2 48	53.9	15.5	19 17 37.2	58.9	20.5
*40		b Vulpeculæ	4	+24 21	25.6	49.5	19 22 13.4	37.2	0.8
41		h² Sagittarii	4.5	—25 14	22.2	46.2	19 27 10.2	34.2	58.2
42		σ Aquilæ	5	+ 5 03	45.5	7.1	19 31 28.8	30.6	12.5
43		2310 A. S. C.	6	—15 50	52.5	15.3	19 34 37.9	0.5	22.8
44		γ Aquilæ	3	+10 14	6.2	28.2	19 38 50.2	12.3	34.5
*45		α Aquilæ	1.2	+ 8 27	25.8	47.8	19 43 09.7	31.6	53.5
46		β Aquilæ	4	+ 6 01	54.8	16.6	19 47 38.5	0.4	22.2
47	21	ε Aquilæ	3.4	+14 51	47.1	9.6	18 52 32.1	54.5	17 0
48		τ Sagittarii	4	—27 54	20.0	44.5	18 57 09.0	33.5	58.0
49		π Sagittarii	4.5	—21 16	40.0	3.3	19 00 26.6	50.0	13.2

October 17.—The adjustments were examined. No errors of collimation or level.
20.—Collimation and level undisturbed.
21.—Instrument as yesterday.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	33	41.12		+0	05.17	+0	05.05	+0.06	22	33	36.07	1
22	37	53.46					.05		22	37	48.41	*2
22	41	19.52					.05		22	41	14.47	3
22	44	28.52					.05		22	44	23.47	4
22	49	00.76			05.06		.05		22	48	55.71	5
22	53	59.44			05.18		.05		10	53	54.39	*6
22	56	59.52		+0	04.78	+0	05.05	+0.06	22	56	54.47	7
20	31	08.52	— .149			+0	05.26	+0.12	20	31	03.11	8
20	36	49.68	— .167				.26		20	36	44.25	9
20	45	57.56	— .148				.26		20	45	52.15	10
20	48	55.26	— .143				.26		20	48	49.86	11
20	52	09.12	+ .089				.26		20	52	03.95	*12
20	57	42.64	— .093				.26		20	57	37.29	13
21	01	04.74	— .132				.26		21	00	59.35	14
21	06	18.88	— .031	+0	05.45		.26		21	06	13.59	15
21	09	30.60	— .147				.26		21	09	25.19	16
21	13	32.42	— .146				.26		21	13	27.01	17
21	16	49.22	— .129				.26		21	16	43.83	18
21	19	48.30	— .158				.26		21	19	42.88	*19
21	23	20.28	— .119		05.21		.26		21	23	14.90	20
21	26	41.70	+ .249		05.32		.26		21	26	36.69	*21
21	80	28.00	— .061				.26		21	30	22.68	22
21	36	31.52	— .084	+0	05.13	+0	05.26	+0.12	21	36	26.18	23
16	19	47.84	+ .403	+0	05.42	+0	05.45	+0.14	16	19	42.79	24
16	23	30.50	+ .126				.45		16	23	25.18	25
16	28	32.18	+ .307				.45		16	28	27.04	26
16	40	00.50	+ .469				.45		16	39	55.92	27
16	46	36.60	+ .193				.45		16	46	31.34	28
16	57	14.56	+ .406				.45		16	57	09.52	29
17	01	23.48	+ .337				.45		17	01	18.37	30
17	08	24.58	— .445			+0	05.45	+0.14	17	08	18.69	31
18	01	27.82	+ .180			+0	05.76	+0.12	18	01	22.24	32
18	33	42.12	+ .678				.76		18	33	37.04	33
18	49	45.98	+ .892				.76		18	49	41.11	34
18	52	32.50	+ .380				.77		18	52	27.11	35
19	00	26.74	+ .838				.77		19	00	21.81	36
19	08	28.26	+ .810				.77		19	08	23.30	37
19	12	45.50	+ .769				.77		19	12	40.50	38
19	17	37.20	+ .531	+0	05.95		.77		19	17	31.96	39
19	22	13.30	+ .218				.77		19	22	07.78	*40
19	27	10.20	+ .895				.77		19	27	05.32	41
19	31	28.90	+ .503				.77		19	31	23.63	42
19	34	37.80	+ .763				.77		19	34	32.79	43
19	38	50.28	+ .438		05.84		.77		19	38	44.95	44
19	43	09.68	+ .461		05.66		.77		19	43	04 37	*45
19	47	38.50	+ .491	+0	05.77	+0	05.77	+0.12	19	47	33.22	46
18	52	32.06	+ .380			+0	05.67	—0.15	18	52	26.78	47
18	57	09.00	+ .936				.67		18	57	04.27	48
19	00	26.62	+ .838			+0	05.67	—0.15	19	00	21.79	49

Nos. 2, 12. 19, 40. Two stars in the field of the instrument.
6. α Ursæ Majoris, sub-polo.
21. β Cephei double: smaller star of the 9th magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 21 cont'd.	d Sagittarii	5	—19°14′	42.0	5.2	19 08 28.2	51.2	14.0
2		δ Aquilæ	3.4	+ 2 48	53.5	15.2	19 17 36.9	58.5	20.3
3		c Aquilæ	6	+ 1 38	23.2	45.0	19 21 06.6	28.3	50.0
*4		β¹ Cygni	3	+27 38			19 24 26.2	50.7	
5		κ Aquilæ	5	— 7 22	44.5	6.5	19 28 28.3	50.2	12.2
6		α Sagittæ	4	+17 39	21.5	44.5	19 33 07.4	30.3	52.9
7		γ Aquilæ	3	+10 14	6.0	28.0	19 38 50.1	12.1	34.0
*8		Moon I	(7.2)	—22 26	36.2		19 42 24.6		13.0
9		β Aquilæ	4	+ 6 01	54.6	16.5	19 47 38.4	0.2	23.1
10		c Sagittarii	4.5	—28 09	12.0	36.5	19 53 01.0	25.5	50.0
11		62 Aquilæ	6	— 1 09	36.5	58.3	19 56 20.0	41.8	3.5
12		64 Aquilæ	6	— 1 08	14.2	36.0	19 59 57.6	19.3	41.0
13		θ Aquilæ	3.4	— 1 17	31.0	52.8	20 03 14.5	36.2	56.0
*14	23	α² Capricorni	3	—13 02	37.6	0.0	20 09 22.2	44.5	6.5
*15		κ Cephei	4.5	+77 14	53.5	32.5	20 14 10.0	48.5	27 5
16		λ Ursæ Min.	4	+88 50			20 19 59.5		
*17		i Cygni	4.5	+29 50	12.0	37.0	20 23 02.0	27.0	52.2
18		η Delphini	6	+12 29	49.5	11.8	20 26 34.0	56.3	18.5
19		δ Delphini	5	+14 31	25.7	48.0	20 36 10.5	32.8	55.2
20		ε Aquarii	4.5	—10 04	28.5	50.5	20 39 12.5	34.5	56.5
21		η Cephei	3.4	+61 18	40.0	24.8	20 42 09.5	55.2	40.0
22		r Vulpeculæ	5.6	+26 30	39.0	3.1	20 45 27.3	51.8	16.0
23		2483 A. S. C.	7	+ 3 35	15.6	37.5	20 49 59.2	21.0	42.7
24		n Capricorni	6.7	—27 30	38.5	2.8	20 52 27.3	51.8	16.3
*25		η Capricorni	5	—20 29	43.3	6.5	20 55 29.5	53.0	16.0
26		χ¹ Capricorni	6	—21 49	48.6	12.1	20 59 35.5	59.0	22.3
*27		γ Equulei	5	+ 9 30	1.1	23.2	21 02 45.2	7.2	29.3
28		ζ Cygni	3	+29 35	28.6	54.0	21 06 18.5	43.8	58.7
29		2522 A. S. C.	7.8	—16 50	48.1	10.6	21 10 33.3	56.2	18.9
30		α Cephei	3	+61 55	22.5	8.5	21 14 54.5	40.6	27.0
31		Moon I	(9.3)	—14 22	10.2	33.5	21 19 56.8	19.1	41.9
*32	24	η Capricorni	5	—20 29	43.8	7.0	20 55 29.8	53.3	16.5
33		χ¹ Capricorni	5.6	—21 49	49.1	12.5	20 59 36.0	59.4	22.7
*34		γ Equulei	5	+ 9 30	1.2	23.2	21 02 45.2	7.3	29.4
35		ζ Cygni	3	+29 35	29.0	54.0	21 06 18.8	43.6	8.5
36		2522 A. S. C.	7.8	—16 50	48.2	11.0	21 10 33.7	56.5	19.2
37		α Cephei	3	+61 55	21.5	7.7	21 14 54.0	40.3	26.2
38		β Aquarii	3	— 6 16	36.5	58.5	21 23 20.3	42.1	4.0
*39		β Cephei	3	+69 52			21 26 41.8		
40		T¹ Pegasi	5.6	+ 5 03	59.5	21.2	21 30 43.1	5.0	26.7
41		κ Capricorni	5	—19 35	9.5	32.5	21 33 55.1	18.5	41.5
42		ε Pegasi	3	+ 9 09	47.5	9.7	21 36 31.6	53.6	15.6
43		δ Capricorni	3.4	—16 51	39.2	2.0	21 38 24.8	47.5	10.2
44		13 Pegasi	6	+16 32	58.5	21.2	21 42 43.8	6.5	29.2
45		p Aquarii	6.7	— 5 01	17.4	39.3	21 46 01.1	23.0	44.7
46		C Aquarii	7	— 6 10	18.5	40.3	21 50 02.2	24.0	45.8
47		28 Aquarii	6	— 0 19	22.5	44.2	21 53 06.0	27.8	49.5
48		α Aquarii	3	— 1 05	2.6	24.4	21 57 46.1	7.8	29.5
49		37 Aquarii	6.7	—11 36	27.5	49.8	22 02 11.9	34.0	56.2
50		Moon I	(10.3)	— 9 18	10.6	33.3	22 05 55.8	18.2	40.6
51		θ Aquarii	4.5	— 8 34	51.9	13.9	22 08 35.8	57.6	19.5

October 23.—No errors of level or collimation. The observations were interrupted by clouds.
24.—The azimuth screw was moved; other adjustments undisturbed.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
19	08	28.12	+ .810			+0	05.67	—0.15	19	08	23.26	1
19	17	36.88	+ .531	+0	05.68		.67		19	17	31.74	2
19	21	06.62	+ .544				.67		19	21	01.49	3
19	24	26.22	+ .198				.67		19	24	20.75	*4
19	28	28.34	+ .655				.67		19	28	23.32	5
19	33	07.32	+ .842				.67		19	33	01.99	6
19	38	50.04	+ .438		05.65		.67		19	38	44.81	7
19	42	24.60	+ .855				.67		19	42	19.78	*8
19	47	38.36	+ .491	+0	05.68		.67		19	47	33.18	9
19	53	01.00	+ .940				.67		19	52	56.27	.10
19	56	20.02	+ .579				.67		19	56	14 93	11
19	59	57.62	+ .579				.67		19	59	52.53	12
20	03	14.50	+ .580			+0	05.67	—0.15	20	03	09.41	13
20	09	22.22	+ .331	+0	05.33	+0	05.51	—0.10	20	09	17.04	*14
20	14	10.40	— .115				.51		20	14	04.78	*15
20	19	59.50	—15.411	—0	02.39		.51		20	19	38.58	16
20	23	02.04	+ .075				.51		20	22	56.60	*17
20	26	34.02	+ .187				.51		20	26	28.70	18
20	36	10.44	+ .175				.51		20	36	05.10	19
20	39	12.50	+ .314				.51		20	39	07.30	20
20	42	09.90	+ .323				.51		20	42	04.71	21
20	45	27.44	+ .098				.61		20	45	22.03	22
20	49	59.20	+ .237				.51		20	49	53.93	23
20	52	27.84	+ .424				.51		20	52	22.25	24
20	55	29.66	+ .377				.51		20	55	24.53	*25
20	59	35.50	+ .385				.51		20	59	30.37	26
21	02	45.20	+ .204				.51		21	02	39.89	*27
21	06	18.62	+ .076	+0	05.40		.51		21	06	13.19	28
21	10	33.42	+ .354				.51		21	10	28.26	29
21	14	54.62	— .341	+0	05.88		.51		21	14	48.77	30
21	19	56.20	+ .339			+0	05.51	—0.10	21	19	51.03	31
20	55	30.08	+ .092			+0	05.44	—0.06	20	55	24.73	*32
20	59	35.94	+ .094				.44		20	59	30.59	33
21	02	45.26	+ .050				.44		21	02	39.87	*34
21	06	18.78	+ .019	+0	05.52		.44		21	06	13.36	35
21	10	33.72	+ .086				.44		21	10	28.37	36
21	14	53.94	— .083		05.52		.44		21	14	48.42	37
21	23	20.28	+ .071		05.48		.44		21	23	14.91	38
21	26	41.80	— .149		05.41		.44		21	26	36.21	*39
21	30	43.10	+ .056				.44		21	30	37.72	40
21	33	55.50	+ .090				.44		21	33	50.15	41
21	36	31.60	+ .050		05.44		.44		21	36	26.21	42
21	38	24.74	+ .086				.44		21	38	19.39	43
21	42	43.64	+ .040				.44		21	42	38.44	44
21	46	01.10	+ .070				.44		21	45	55.73	45
21	50	02.16	+ .071				.44		21	49	56.79	46
21	53	06.00	+ .063				.44		21	53	00.62	47
21	57	46.08	+ .064	+0	05.34		.44		21	57	40.70	48
22	02	11.88	+ .079				.44		22	02	06.52	49
22	05	55.70	+ .075				.44		22	05	50.33	50
22	08	35.74	+ .074			+0	05.44	—0.06	22	08	30.37	51

Nos. 4, 8. Clouds.
4, 14, 15, 17, 27, 34. Two stars in the field of the instrument.
15. κ Cephei double; smaller star of the 9th magnitude.
25, 32. η Capricorni double; smaller star of the 9.10 magnitude.
39. β Cephei double; smaller star of the 9th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Oct. 24 cont'd.	γ Aquarii	4	— 2°11′	52.2	14.0	22 13 35.8	57.5	19.2
2		π Aquarii	5	+ 0 34	35.1	57.0	22 17 18.7	40.4	2.1
*3		ζ Aquarii	4.5	— 0 50	4.5	26.2	22 20 47.9	9.5	31.2
4	25	α Aquarii	3	— 1 05	2.6	24 3	21 57 46.0	7.7	29.4
5		37 Aquarii	7	—11 36	27.5	49 5	22 02 11.6	34.0	56 2
6		θ Aquarii	4.5	— 8 34	51.5	13.7	22 08 35.6	57.5	19.4
7		γ Aquarii	4	— 2 11	52.2	4.0	22 13 35.7	57.5	19.2
8		π Aquarii	5	+ 0 34	35.0	56.7	22 17 18.5	40.2	2.0
*9		ζ Aquarii	4.5	— 0 50	4.5	26.2	22 20 47.9	9.6	31 2
10		58 Aquarii	6.7	—11 43	40.2	2.4	22 23 24.5	46.7	8 3
11		2697 A. S. C.	7	— 0 13	53.8	15.5	22 26 37.2	58.8	20.5
12		κ Aquarii	6	— 5 01	56.9	18.6	22 29 40.5	2.3	24.2
13		ζ Pegasi	3	+10 01	57.1	19.2	22 33 41.3	3.4	25.4
14		ξ Pegasi	4.5	+11 22	10.2	32.3	22 38 54.5	16.6	38.6
15		μ Pegasi	4	+23 46	41.7	5.6	22 42 29.4	53.2	17.0
16		K Aquarii	6	—12 27	31.2	53.5	22 45 15.6	37.8	0.0
17		α Piscis Aust.	1	—30 27	10.5	35.5	22 49 00.5	26.0	51.0
18		Moon I	(11.4)	— 3 51	28.5	50.4	22 51 12.6	34.8	57 0
19		ϑ Piscium	5	+ 2 58	13.2	35.0	22 55 56.7	18.5	40.2
20		h Pegasi	5.6	+24 37	44.4	8.2	22 59 32.0	55.9	20.0
21		p Pegasi	6	+ 7 52	8.5	30.2	23 03 52.0	13.9	35.8
22		φ Aquarii	5	— 6 54	31.2	53.0	23 06 14.7	36.3	58.2
23		γ Piscium	4.5	+ 2 25	21.3	43.0	23 09 04.8	26.5	48.2
24	26	α Piscis Aust.	1	—30 27	10.5	35.7	22 49 00.9	26.0	51.2
25		2747 A. S. C.		+ 2 10	2.9	24.6	22 52 46.3	8.0	29.8
26		ϑ Piscium	5	+ 2 58	13.1	34.9	22 55 56.6	18.3	40.0
27		h Pegasi	4.5	+24 37	44.2	8.1	22 59 32.0	55.9	19.8
28		p Pegasi	5.6	+ 7 52	8.2	30 2	23 03 52.0	13.9	36.0
29		φ Aquarii	4.5	— 6 54	31.0	52.8	23 06 14.5	36.4	58.3
30		γ Piscium	4.5	+ 2 55	21.5	43.2	23 09 04.9	26.6	48.3
31		T Aquarii	6	—27 51	7.0	31,6	23 12 56.1	20.7	45.2
32		2793 A. S. C.	7	—22 38	3.5	27.0	23 15 50.5	14.0	37.6
*33		κ^2 Piscium	6.7	+ 0 15	32.2	54.0	23 19 15.7	37 3	59.0
34		w^3 Piscium	7	— 1 58	14.2	35.9	23 23 57.7	19.4	41.0
35		ι Piscium	4.5	+ 4 46	12.5	34.3	23 31 56.0	17.8	39.5
36		λ Piscium	5	+ 0 55	22 4	44.1	23 34 05.8	27.5	49.2
37		Moon I	(12.4)	+ 1 40	4.6	26.8	23 36 48.9	11.0	33.1
38		δ Ap. Sculp.	5	—29 01	58.1	23.0	23 40 47.8	12.6	37.5
39		2853 A. S. C.	6	—15 08	44.2	6.6	23 44 29.0	51.5	14.0
40		26 Piscium	6	+ 6 11	26.0	47 7	23 47 09.5	31.2	53.0
41		ω Piscium	4.5	+ 5 59	35 0	56.8	23 51 18.6	40.4	2.2
*42		g Ceti	4.5	—18 12	59.2	22.2	23 55 45.0	7.5	30.8
43		α Andromedæ	1	+28 13	31.5	56.0	0 00 20.5	45.0	9.5
44	27	Georgian	Centre	— 4 21	59.6	21.3	23 27 43.1	4.8	26.6
45		ι Piscium	4.5	+ 4 46	12.3	34.0	23 31 55.8	17.5	39.2
46		λ Piscium	5	+ 0 55	21.8	43.5	23 34 05.8	27.0	48 8
47		δ Ap. Sculp.	5	—29 01	58.0	22.8	23 40 47.5	12.3	37.2
48		2853 A. S. C.	6	—15 08	44.2	6.6	23 44 29.1	51.5	14.1
49		26 Piscium	6	+ 6 11	26.0	47.7	23 47 09.4	31.2	53.0
50		ω Piscium	4.5	+ 5 59	34.9	56.6	23 51 18.4	40.2	2.1

October 25, 26.—The instrumental adjustment was examined on each of these days.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
22	13	35.74	+ .093			+0	05.43	—0.06	22	13	30.40	1
22	17	18.66	+ .062				.43		22	17	13.29	2
22	20	47.86	+ .064			+0	05.43	—0.06	22	20	42.49	*3
21	57	46.00	+ .128	+0	05.35	+0	05.38	+0.03	21	57	40.75	4
22	02	11.76	+ .160				.38		22	02	06.54	5
22	08	35.54	+ .149				.38		22	08	30.31	6
22	13	35.72	+ .131				.38		22	13	30.47	7
22	17	18.48	+ .121				.38		22	17	13.22	8
22	20	47.88	+ .128				.38		22	20	42.63	*9
22	23	24.54	+ .160				.38		22	23	19.32	10
22	26	37.16	+ .126				.38		22	26	31.91	11
22	29	40.50	+ .139				.38		22	29	35.26	12
22	33	41.28	+ .098		05.44		.38		22	33	36.00	13
22	38	54.44	+ .094				.38		22	38	49.15	14
22	42	29.38	+ .057				.38		22	42	24.06	15
22	45	15.62	+ .160				.38		22	45	10.40	16
22	49	00.70	+ .218	+0	06.34		.38		22	48	55.54	17
22	51	12.66	+ .136				.38		22	51	07.42	18
22	55	56.72	+ .117				.38		22	55	51.46	19
22	59	32.10	+ .054				.38		22	59	26.77	20
23	03	52.08	+ .103				.38		23	03	46.80	21
23	06	14.68	+ .122				.38		23	06	09.42	22
23	09	04.76	+ .119			+0	05.38	+0.03	23	08	59.50	23
22	49	00.86	+ .162	+0	05.46	+0	05.49	+0.15	22	48	55.53	24
22	52	46.32	+ .090				.49		22	52	40.92	25
22	55	56.58	+ .088				.49		22	55	51.18	26
22	59	32.00	+ .040				.49		22	59	26.55	27
23	03	52.06	+ .078				.49		23	03	46.65	28
23	06	14.60	+ .106				.49		23	06	09.22	29
23	09	04.90	+ .088				.49		23	08	59.50	30
23	12	56.12	+ .156				.49		23	12	50.79	31
23	15	50.52	+ .142				.49		23	15	45.17	32
23	19	15.64	+ .093				.49		23	19	10.24	*33
23	23	57.64	+ .098				.49		23	23	52.25	34
23	31	56.02	+ .084		05.59		.50		23	31	50.60	35
23	34	05.80	+ .091				.50		23	34	00.39	36
23	36	48.88	+ .092				.50		23	36	43.47	37
23	40	47.80	+ .159				.50		28	40	42.46	38
23	44	29.06	+ .125				.50		23	44	23.68	39
23	47	09.48	+ .081				.50		28	47	04.06	40
23	51	18.60	+ .081				.50		23	51	13.18	41
23	55	44.94	+ .132				.50		28	55	39.57	*42
0	00	20.50	+ .031	+0	05.46	+0	05.50	+0.15	0	00	15.03	43
23	27	43.08	+ .653			+0	05.70	±0.00	23	27	38.03	44
23	31	55.76	+ .529	+0	05.79		.70		23	31	50.59	45
23	34	05.28	+ .584				.70		23	34	00.16	46
23	40	47.56	+1.007				.70		23	40	42.87	47
23	44	29.10	+ .798				.70		23	44	24.20	48
23	47	09.46	+ .516				.70		23	47	04.28	49
23	51	18.44	+ .519			+0	05.70	±0.00	23	51	13.26	50

Nos. 3, 9. ζ Aquarii double; the smaller star of the 6th magnitude.
33. Two stars in the field of the instrument.
42. Recorded 23*h*. 56*m*. at III wire.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V
					s.	s.	h. m. s.	s.	s.
1	Oct. 27 cont'd.	*g* Ceti	4.5	−18°12′	59.1	22.0	23 55 44.8	7.7	39.5
2		α Andromedæ	1	+28 13	31.5	56.0	0 00 20.5	45.0	9.6
3		γ Pegasi	2.3	+14 18	28.0	50.5	0 05 12.9	35.4	57.7
4		36 Piscium	6.7	+ 7 21	50.0	12.0	0 08 33.5	55.5	17.5
5		40 Piscium	6.7	+15 22	8.2	31.0	0 11 53.3	15.6	38.5
6		9 Ceti	6.7	−13 06	7.8	30.1	0 14 52.2	14.5	37.0
7		48 Piscium	6	+15 34	22.2	44.6	0 20 07.2	29.8	52.3
8		Moon I	(13.4)	+ 7 33	5.7	28.1	0 23 50.5	12.9	35.3
9		13 Ceti	6	− 4 28	29.8	51.7	0 27 13.6	35.3	57.2
10		α Cassiopeæ	3	+55 40	25.5	3.8	0 31 42.5	21.3	59.5
11		β Ceti	2.3	−18 51	59.8	22.7	0 35 45.7	8.7	31.5
12		δ Piscium	5	+ 6 43	52.2	14.2	0 40 36.0	57.9	19.6
13	29	ο Piscium	5	+ 8 21	26.0	48.0	1 37 09.8	31.7	53.6
*14		χ^2 Ceti	5	−11 28	11.5	33.7	1 41 55.8	18.0	40.2
15		β Arietis	3	+20 02	15.6	38.8	1 46 01.9	25.0	48.0
16		50 Cassiopeæ	4.5	+71 39	55.5	5.5	1 50 14.0	22.5	31.5
*17		α Piscium	5	+ 2 00	15.3	37.0	1 53 58.8	20.6	42.2
*18		α Arietis	3	+22 43	36.2	0.0	1 58 23.3	46.8	10.3
19		64 Ceti	6.7	+ 7 49	23.6	45.5	2 03 07.5	29.4	51.3
20		ξ^1 Ceti	5	+ 8 06	0.6	22.5	2 04 44.5	6.4	28.3
21		Moon I	(15.5)	+18 08	46.2	9.5	2 06 32.8	55.9	19.2
22		θ^1 Arietis	6	+19 10	41.5	4.3	2 09 27.1	50.0	13.3
23		69 Ceti	6	− 0 20	13.9	35.6	2 13 57.3	19.0	40.6
24		71 Ceti	6	− 3 30	22.3	44.0	2 17 05.7	27.5	49.2
25		γ Ceti	3	+ 2 33	30.0	51.7	2 35 13.5	35.2	57.0
*26	Nov. 2	β Orionis	1	− 8 23	18.2	40.2	5 07 02.0	23.9	45.8
27		*n* Tauri	5.6	+21 56	6.0	29.2	5 09 52.6	16.2	39.5
*28		22 Aurigæ	7	+28 47	38.5	3.2	5 13 28.0	52.9	17.7
29		β Tauri	2	+28 28	34.5	59.4	5 16 24.0	48.6	13.5
30		658 A. S. C.	6	−12 06	3.8	26.1	5 19 48.2	10.5	32.7
*31		δ Orionis	2	− 0 25	17.6	39.5	5 24 01.4	23.2	44.9
32		α Leporis	3.4	−17 56	5.1	27.9	5 25 50.5	13.2	36.1
*33		ε Orionis	2.3	− 1 18	33.5	55.2	5 28 17.0	38.8	0.5
34		α Columbæ	2	−34 09	8.1	34.5	5 34 00.8	27.1	53.3
*35		γ Leporis	4	−22 30	10.6	34.2	5 37 57.6	21.0	44.6
*36		κ Orionis	3	− 9 44	36.3	58.6	5 40 20.6	42.6	4.6
37		C Tauri	5	+27 34	39.9	4.5	5 43 29.0	53.6	18.1
38		α Orionis	1	+ 7 22	58.3	20.2	5 46 42.0	3.9	25.7
*39		59 Orionis	6	+ 1 49	33.5	55.2	5 50 16.9	38.6	0.4
40		χ^3 Orionis	5	+20 08	51.0	14.2	5 54 37.3	0.5	23.6
41		θ Leporis	5	−14 55	20.2	42.5	5 59 04.9	27.5	49.9
*42		θ Columbæ	5	−37 14	17.0	44.2	6 02 11.3	38.5	6.0
*43		f^2 Orionis	6	−16 11	38.1	1.0	6 06 23.6	46.2	8.6
*44		11 Geminorum	7.8	+23 31	0.0	23.8	6 09 47.5	11.2	34.5
45		μ Geminorum	3	+22 35	42.2	5.6	6 13 29.1	52.6	16.2
46		Moon II	(19.6)	+25 52	30.9	55.7	6 18 20.5	45.2	10.0
*47		δ Ursæ Min.	3	+86 36			6 23 03.2		
48		51(Hev.)Cephei	5.6	+87 15			6 24 52.5		
49		γ Geminorum	3	+16 32	54.5	17.2	6 28 39.8	2.8	25.0
50		ε Geminorum	3	+25 17	29.3	53.3	6 34 17.3	41.4	5.5
*51		α Canis Maj.	1	−16 30	30.5	43.2	6 38 15.7	38.3	0.6

October 29.—The observations were interrupted by clouds.
November 2.—The errors of collimation and level were examined; no errors.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
23	55	44.82	+ .840			+0	05.70	±0.00	23	55	39.96	1
0	00	20.52	+ .187	+0	05.65		.70		0	00	15.01	2
0	05	12.90	+ .404		05.69		.70		0	05	07.60	3
0	08	33.70	+ .502				.70		0	08	28.50	4
0	11	53.32	+ .394				.70		0	11	48.01	5
0	14	52.32	+ .768				.70		0	14	47.39	6
0	20	07.22	+ .392				.70		0	20	01.91	7
0	23	50.50	+ .499				.70		0	23	45.30	8
0	27	13.52	+ .654				.70		0	27	08.47	9
0	31	42.52	— .480		05.69		.70		0	31	36.34	10
0	35	45.68	+ .839	+0	05.69		.70		0	35	40.82	11
0	40	35.98	+ .508			+0	05.70	±0.00	0	40	30.79	12
1	37	09.82	+ .432			+0	05.37	—0.16	1	37	04.88	13
1	41	55.84	+ .659				.37		1	41	51.18	*14
1	46	01.86	+ .289				.37		1	45	56.78	15
1	50	13.80	—1.442				.37		1	50	06.99	16
1	53	58.78	+ .505				.37		1	53	53.91	*17
1	58	23.32	+ .253	+0	05.42		.37		1	58	18.20	18
2	03	07.46	+ .438				.37		2	03	02.53	19
2	04	44.46	+ .433				.37		2	04	39.52	20
2	06	32.72	+ .312				.37		2	06	27.66	21
2	09	27.24	+ .300				.37		2	09	22.17	22
2	13	57.28	+ .531				.37		2	13	52.44	23
2	17	05.74	+ .567				.37		2	17	00.94	24
2	35	13.48	+ .498	+0	05.23	+0	05.37	—0.16	2	35	08.61	25
5	07	02.02	+ .297	+0	04.12	+0	03.95	—0.28	5	06	58.37	*26
5	09	52.70	+ .126				.95		5	09	48.88	27
5	13	28.06	+ .080				.95		5	13	24.19	*28
5	16	24.00	+ .082		04.06		.95		5	16	20.13	29
5	19	48.26	+ .318				.95		5	19	44.63	30
5	24	01.32	+ .253		04.04		.95		5	23	57.62	*31
5	25	50.56	+ .342		03.79		.95		5	25	46.95	32
5	28	17.00	+ .258		04.04		.95		5	28	13.31	*33
5	34	00.76	+ .462		03.95		.95		5	33	57.27	34
5	37	57.60	+ .380				.95		5	37	54.03	*35
5	40	20.54	+ .304				.95		5	40	16.89	*36
5	43	29.02	+ .089				.95		5	43	25.16	37
5	46	42.02	+ .211		03.79		.94		5	46	38.29	38
5	50	16.92	+ .241				.94		5	50	13.22	*39
5	54	37.32	+ .136				.94		5	54	33.52	40
5	59	05.00	+ .334				.94		5	59	01.39	41
6	02	11.40	+ .498				.94		6	02	07.95	*42
6	06	23.50	+ .341				.94		6	06	19.90	*43
6	09	47.40	+ .115				.94		6	09	43.57	*44
6	13	29.14	+ .121		03.95		.94		6	13	25.32	45
6	18	20.46	+ .100				.94		6	18	16.62	46
6	23	03.20	+5.451	+0	06.30		.94		18	23	04.71	*47
6	24	52.50	—6.259	—0	00.72		.94		6	24	42.30	48
6	28	39.76	+ .159				.93		6	28	35.99	49
6	31	17.36	+ .100				.93		6	34	13.53	50
6	38	15.66	+ .343	+0	03.81	+0	03.93	—0.28	6	38	12.07	*51

Nos. 14, 28, 31, 33, 35, 36, 39, 42, 43, 51. Two stars in the field of the instrument.
17. 113 Piscium double; the small star of the 6.7 magnitude.
26, 41. Three stars in the field.
47. δ Ursæ Minoris, sub-polo.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 2	d Geminorum	6	+21°56′	22.5	46.3	6 42 09.8	33.2	56.2
*2	cont'd.	e^1 Geminorum	5.6	+13 22	4.0	26.3	6 45 48.6	11.0	33.2
3		μ Canis Maj.	5.6	—13 50	11.6	34.3	6 48 56.7	19.0	41.4
*4		ε Canis Maj.	2.3	—28 45	39.8	4.6	6 52 29.4	54.2	19.0
*5		ζ Geminorum	4	+20 48	2.5	26.0	6 54 48.6	12.0	35.4
*6	4	α Canis Min.	1.2	+ 5 38	21.6	43.5	7 31 05.4	27.3	49.1
7		β Geminorum	2	+28 24	53.0	17.6	7 35 42.2	6.9	31.5
*8		c Arg. in pup.	4	—37 35	46.2	13.6	7 39 41.0	8.4	36.0
9		φ Geminorum	5	+27 10	4.2	28.5	7 43 52.9	17.3	41.8
10		b Arg. in pup.	5	—38 27	11.3	38.9	7 47 06.5	34.1	1.8
11		ω^1 Cancri	6	+25 49	37.5	1.5	7 51 25.5	49.6	13 6
*12		15 Argus	3.4	—23 51	4.6	28.5	8 00 52.4	16.3	40.1
*13		ϕ^2 Cancri	6.7	+27 27	28.0	52.3	8 17 16.6	41.0	5.5
*14		λ Ursæ Min.	6	+88 50			8 19 49.5		
15		Moon II	(21.7)	+19 23	34.5	58.0	8 23 21.6	45.2	8.8
*16		1044 A. S. C.	6.7	+ 7 10	46.2	8.0	8 27 29.9	51.7	13.8
17		η Pixid. Naut.	6	—25 42	22.2	46.5	8 31 10 5	34.6	58.7
*18		δ Cancri	4.5	+18 44	59.4	22.3	8 35 45.2	8.2	31.1
19		ε Hydræ	4	+ 7 00	44.0	5.8	8 38 27.5	49.4	11.2
20		54 Cancri	6.7	+15 56	31.3	53.8	8 42 16 3	38.9	1.5
21		ρ^4 Cancri	6	+28 32	25.2	49.9	8 46 14.5	39.1	3.9
22		α^2 Cancri	5	+12 28	9.2	31.4	8 49 53.7	15.9	38.2
23	5	δ Cancri	4.5	+18 44	59.5	22.3	8 35 45.2	8.1	31.2
24		ε Hydræ	4	+ 7 00	43.8	5.6	8 38 27.5	49.4	11.2
25		54 Cancri	6.7	+15 56	31.2	54.0	8 42 16.5	39.0	1.5
26		ρ^4 Cancri	6	+28 32	25.0	49.8	8 46 14.5	39.2	4.0
27		α^2 Cancri	5	+12 28	9.1	31.3	8 49 53.5	15.7	38.1
28		ν Cancri	6	+25 05	45.0	8.8	8 53 32.6	56.4	20.5
29		ω Hydræ	6	+ 5 43	58.5	20.4	8 57 42.2	4.1	26.0
*30		1112 A. S. C.	5.6	—25 13	21.7	45.9	9 01 09.8	33.8	57.8
31		e Ursæ Maj.	5	+54 41	35.2	12 8	9 04 50.3	27.8	53 0
32		K^2 Hydræ	6	— 5 41	10 3	32.1	9 08 53.9	15.7	37.5
33		M^2 Hydræ	5.6	—11 18	28.5	50.6	9 12 12.7	34 8	57.0
34		κ Leonis	5	+26 52	41.3	5.6	9 15 29.9	54.2	18.5
35		Moon II	(22.7)	+14 12	58.2	21.1	9 20 44.1	7.0	29.9
*36		β Cephei	3	+69 52	33.0	36.0	9 26 39.0	42.2	45.5
37		ο Leonis	4	+10 37	1.1	23.2	9 32 45.3	7.4	29.5
38		ε Leonis	3	+24 30	7.2	31.0	9 36 54.8	18.7	42.5
39		υ Ursæ Maj.	4.5	+59 47	18.8	1.9	9 39 45.0	28.1	11.2
40		μ Leonis	3	+26 45	0.1	24.2	9 43 48 4	12 8	37.2
41		π Leonis	4.5	+ 8 48	10.0	32.1	9 51 54.0	16.0	38.1
42	23	ψ^2 Aquarii	5	—10 03	49.3	11.5	23 09 33.5	55.5	17.6
*43		τ Pegasi	5	+22 52	54.3	18.1	23 12 41.6	5 1	28.6
*44		κ^1 Piscium	5.6	+ 0 23	58.5	20.4	23 18 42.2	3.9	25.6
45		w^2 Piscium	7	— 1 54	32.9	54.6	23 21 16.3	38.0	59.7
46		y Pegasi	5	+21 37	39.2	2.6	23 25 26 0	49.4	12.7
47		16 Piscium	6	+ 1 13	28.3	50.2	23 28 11.8	33.5	55.2
48		ι Piscium	4.5	+ 4 46	58.2	20.1	23 31 41.8	3.5	25.3
49		λ Piscium	5	+ 0 54	8.0	29.7	23 33 51.4	13.1	34.8
50		m Piscium	6	+ 2 36	28.0	49.8	23 38 11.3	33 2	54.6

November 4.—The error of collimation was found to be +0s.45. Clouds at observation of 15 Argus. λ Ursæ Minoris, sub polo.

5.—At commencement of observations, collimation as yesterday. The screw was turned after observing the moon. No error at end. β Cephei, sub-polo.

23.—The transit was adjusted at 18*h*.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
6	42	09.60	+ .126			+0	03.93	—0.28	6	42	05.80	1
6	45	48.62	+ .177				.93		6	45	44.87	*2
6	48	56.60	+ .328				.93		6	48	53.00	3
6	52	29.40	+ .462	+0	03.85		.93		6	52	25.93	*4
6	54	48.90	+ .183			+0	03.93	—0.28	6	54	45.10	*5
7	31	05.38	+ .546	+0	03.47	+0	03.35	—0.50	7	31	02.58	*6
7	35	42.24	+ .546		03.36		.35		7	35	39.44	7
7	39	41.04	+ .776				.35		7	39	38.47	*8
7	43	52.94	+ .544				.35		7	43	50.13	9
7	47	06.52	+ .787				.35		7	47	03.96	10
7	51	25.54	+ .543				.35		7	51	22.73	11
8	00	52 38	+ .656		03.31		.34		8	00	49.70	*12
8	17	16.68	+ .545				.34		8	17	13.88	*13
8	19	49.50	—15.719		02.97		.34		20	19	30.44	*14
8	23	21.62	+ .537				.34		8	23	18.82	15
8	27	29.92	+ .544				.34		8	27	27.12	*16
8	31	10.50	+ .669				.33		8	31	07.84	17
8	35	45.24	+ .537				.33		8	35	42.45	*18
8	38	27.58	+ .544	+0	03.23		.33		8	38	24.79	19
8	42	16.36	+ .537				.33		8	42	13.57	20
8	46	14.52	+ .547				.33		8	46	11.74	21
8	49	53.68	+ .538			+0	03.33	—0.50	8	49	50.89	22
8	35	45.26	+ .121			+0	02.76	—0.55	8	35	42.62	23
8	38	27.50	+ .177	+0	02.76		.76		8	38	24.92	24
8	42	16.44	+ .089				.76		8	42	13.77	25
8	46	14.50	+ .045				.76		8	46	11.78	26
8	49	53.54	+ .118				.76		8	49	50.90	27
8	53	32.66	+ .583				.76		8	53	30.48	28
8	57	42.24	+ .121				.76		8	57	39.60	29
9	01	09.80	+ .219				.76		9	01	07.26	*30
9	04	50.28	— .157				.76		9	04	47.36	31
9	08	53.90	+ .155				.75		9	08	51.30	32
9	12	12.72	+ .182				.75		9	12	10.15	33
9	15	29.90	+ .051				.75		9	15	27.20	34
9	20	44 06	+ .094				.75		9	20	41.40	35
9	26	39.14	— 1.731		01.86		.75		21	26	34.66	*36
9	32	45.30	+ .571				.75		9	32	43.12	37
9	36	54.84	+ .565	+0	02.73		.74		9	36	52.66	38
9	39	45.00	— .759				.74		9	39	41.50	39
9	43	48.54	+ .511				.74		9	43	46.31	40
9	51	54.04	+ .567			+0	02.74	—0.55	9	51	51.87	41
23	09	33.48				—0	08.73	—1.49	23	09	42.21	42
23	12	41.54					.73		23	12	50.27	*43
23	18	42.12					.72		23	18	50.84	*44
23	21	16.30					.72		23	21	25.02	45
23	25	25.98					.71		23	25	34.69	46
23	28	11.80					.71		23	28	20.51	47
23	31	41.78		—0	08.49		.71		23	31	50.49	48
23	33	51.40					.70		23	34	00.10	49
23	38	11.38				—0	08.70	—1.49	23	38	20.08	50

No 2. ϵ^1 Geminorum double; smaller star of the 9th magnitude.
4, 5, 6, 18, 43, 44. Two stars in the field of the instrument.
6. The companion to Procyon is of the 10th magnitude.
8. Five stars in the field.
13. ϕ^2 Cancri double; the stars nearly equal.
16. 1044 A. S. C. double; smaller star of the 8th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Nov. 23 cont'd.	79 Pegasi	6.7	+27°57′	43.5	58.1	23 41 32.6	57.1	21.7
2		25 Piscium	6.7	+ 1 12	8.1	29.8	23 44 51.5	13 4	35.2
3		ψ Pegasi	5.6	+24 15	47.7	11.5	23 49 35.4	59.3	23.1
*4		q Piscium	6	— 3 55	52.3	14.1	23 53 35.9	57.7	19.4
5		s Piscium	5.6	— 6 36	23.6	45.3	23 57 07.1	29.0	50.9
6		α Andromedæ	1	+28 13	17.1	41.6	0 00 06.1		
7		Moon I	(10.8)	+ 5 02	48.5	10.5	0 01 32.8	55.1	17.4
8		γ Pegasi	2.3	+14 18	14.0	36.2	0 04 58.5	20.8	43.2
9		36 Piscium	6.7	+ 7 21	35.5	57.5	0 08 19.5	41.5	3.5
10		d Piscium	5.6	+ 7 18	36.6	58.6	0 12 20.6	42.6	4.5
11	24	ψ Pegasi	5.6	+24 15	46.0	9.8	23 49 33.6	57.4	21.2
*12		q Piscium	6	— 3 55	50.8	12.5	23 53 34.3	56.0	17.7
13		s Piscium	5.6	— 6 36	22.0	43.8	23 57 05.5	27.2	49.1
14		α Andromedæ	1	+28 13	15.5	40.1	0 00 04.6	29.2	53.9
15		γ Pegasi	2.3	+14 18	12.1	34.5	0 04 57.0	19.4	41.8
*16		36 Piscium	6.7	+ 7 21	34.2	56.1	0 08 17.9	39.8	1.7
17		d Piscium	5 6	+ 7 18	35.5	57.2	0 12 19.0	40.8	2.7
18		α Phœnicis	2	—43 10	19.5	49.2	0 18 18.8	48.6	18.5
19		n Ceti	6.7	— 4 50	5.7	27.6	0 21 49.5	11.2	33.1
20		47 A. S. C.	7	+ 9 26	6.5	28.8	0 25 50.8	12.9	4.8
21		α Cassiopeæ	3	+55 40	9.1	47.5	0 31 26.0	4.5	43.0
22		β Ceti	2.3	+18 51	44.5	7.5	0 35 30 4	53.3	16.2
23		60 Piscium	6	+ 5 52	21.0	42.7	0 39 04.5	26.3	48.1
24		ϕ^2 Ceti	6	—11 30	19.6	41.8	0 42 04.0	26.2	48.4
25		36 Andromedæ	6	+22 46	35.0	58.6	0 46 22.1	45.7	9.2
26		Moon I	(11.8)	+ 9 28	36.5	59.2	0 49 21.5	44.0	6.5
*27	27	θ^1 Ceti	3	— 9 00	10.3	32.1	1 15 54.1	15.9	38.0
*28		β Arietis	3	+20 02	55.9	19.2	1 45 43.0	05.3	28.0
29		ε Arietis	5	+20 42	11.6	35.1	2 49 58.0	21.6	44.5
*30		α Ceti	2.3	+ 3 28	4.5	26.5	2 53 48.3	10.0	31.8
31		53 Arietis	6.7	+17 16	34.0	56.7	2 58 19.3	42.0	5.0
32		δ Arietis	4	+19 07	37.2	0.2	3 02 23.0	46.0	9.0
33		s Tauri	6	+10 47	49.5	11.6	3 21 33.7	55.8	17.9
34		ε Eridani	4	—10 00	32.2	54.1	3 25 16.1	38.2	0.2
35		F Eridani	6	—17 59	7.0	29.9	3 28 52.7	15.5	38.2
36		τ Fornacis	6	—28 28	10.8	35.5	3 32 00.2	25.0	49.6
*37		g Pleiadum	5.6	+23 48	25.0	48.6	3 35 12.2	35.9	59.7
38		Moon I	(14.9)	+23 32		23.2	3 36 47.7	12.2	36.7
39		η Tauri	3	+23 35			3 37	17.0	40.6
40		f Pleiadum	5	+23 32		9.8	3 39 33.5	57.2	21.0
41		u^2 Tauri	6	+ 6 03	38.2	0.0	3 43 21.9	43.7	5.5
*42		32 Eridani	5	— 3 25	24.9	46.6	3 46 08.3	30.0	51.8
*43		ζ Ursæ Min.	4	+78 17			3 49 28.5		
*44		A^1 Tauri	5	+21 39	22.0	45.5	3 55 08.8	32.2	55.4
45	29	ι Tauri	4.5	+21 21	36.5	59.8	4 53 23.2	46.6	9.9
46		β Eridani	3	— 5 18	5.1	27.0	4 59 48.7	10.5	32.2
*47		ε Ursæ Min.	4	+82 17			5 01 52.2		
48		β Orionis	1	— 8 23	56.5	18.5	5 06 40.3	2.2	24.2
49		τ Orionis	4	— 7 01	56.0	17.8	5 09		23.5
*50		λ Leporis	4.5	—13 20	16.6	39.1	5 12 01.4	23.7	46.0

November 27.—The instrumental adjustments were examined. ☽ ☌ Pleiades.
29.—Occasional cumuli.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
23	41	32.60				—0	08.70	—1.49	23	41	41.30	1
23	44	51.60					.69		23	45	00.29	2
23	49	35.40					.69		23	49	44.09	3
23	53	35.88					.68		23	53	44.56	*4
23	57	07.18					.68		23	57	15.86	5
0	00	06.18		—0	08.66		.68		0	00	14.86	6
0	01	32.86					.68		0	01	41.54	7
0	04	58.54		—0	08.90		.67		0	05	07.21	8
0	08	19.50					.67		0	08	28.17	9
0	12	20.58				—0	08.67	—1.49	0	12	29.25	10
23	49	33.60	+ .055			—0	10.20	—1.49	23	49	43.85	11
23	53	34.26	+ .136				.20		23	53	44.60	*12
23	57	05.52	+ .143				.19		23	57	15.85	13
0	00	04.66	+ .042	—0	10.13		.19		0	00	14.89	14
0	04	56.96	+ .086		10.37		.19		0	05	07.24	15
0	08	17.94	+ .106				.18		0	08	28.23	*16
0	12	19.04	+ .106				.18		0	12	29.33	17
0	18	18.92	+ .272				.17		0	18	29.36	18
0	21	49.42	+ .139				.17		0	21	59.73	19
0	25	50.76	+ .100				.17		0	26	01.03	20
0	31	26.02	— .102		10.09		.16		0	31	36.08	21
0	35	30.38	+ .179	—0	10.10		.16		0	35	40.72	22
0	39	04.52	+ .110				.15		0	39	14.78	23
0	42	04.00	+ .157				.15		0	42	14.31	24
0	46	22.12	+ .060				.15		0	46	32.33	25
0	49	21.54	+ .100			—0	10.14	—1.49	0	49	31.78	26
1	15	54.06	+ .180	—0	14.88	—0	14.90	—1.55	1	16	09.14	*27
1	45	42.28	+ .082				.87		1	45	57.23	*28
2	49	58.16	+ .080				.80		2	50	13.04	29
2	53	48.22	+ .139		14.98		.80		2	54	03.16	*30
2	58	19.40	+ .093				.79		2	58	34.28	31
3	02	23.08	+ .086				.79		3	02	37.96	32
3	21	33.79	+ .115				.76		3	21	48.57	33
3	25	16.16	+ .184				.76		3	25	31.10	34
3	28	52.66	+ .211				.75		3	29	07.62	35
3	32	00.22	+ .252				.75		3	32	15.22	36
3	35	12.28	+ .068				.75		3	35	27.10	*37
3	36	47.70	+ .069				.75		3	37	02.52	38
3	37	53.34	+ .069		14.76		.75		3	38	08.16	39
3	39	33.52	+ .069				.74		3	39	48.33	40
3	43	21.86	+ .131				.74		3	43	36.73	41
3	46	08.32	+ .162				.74		3	46	23.22	*42
3	49	28.50	+1.051	—0	14.72		.73		15	49	44.28	*43
3	55	08.78	+ .076			—0	14.73	—1.55	3	55	23.50	*44
4	53	23.20	+ .108			—0	18.18	—1.49	4	53	41.49	45
4	59	48.70	+ .233				.18		5	00	07.11	46
5	01	52.20	+2.125	—0	17.34		.18		17	02	12.50	*47
5	06	40.34	+ .247	—0	18.13		.17		5	06	58.76	48
5	09	39.72	+ .241				.17		5	09	58.13	49
5	12	01.36	+ .271			—0	18.17	—1.49	5	12	19.80	*50

Nos 4, 12, 16, 27, 29, 44. Two stars in the field of the instrument.
37. Three stars in the field.
42. 32 Eridani is double; the smaller star of the 7th magnitude.
43, 47. ζ and ε Ursæ Minoris, sub polo.
50. λ Leporis double; magnitude of the smaller star not recorded.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V
					s.	s.	h. m. s.	s.	s.
1	Nov. 29	β Tauri	2	+28°28′	13.3	38.0	5 16 02.6	27.3	52.0
*2	cont'd.	δ Orionis	2	— 0 25	56.2	18.0	5 23 39.7	1.5	23.2
3		α Leporis	3.4	—17 56	43.4	6.2	5 25 29.0	51.8	14.6
4		125 Tauri	6	+25 48	52.6	16.6	5 29 40.8	4.9	29.0
5		Moon II	(17.0)	+26 23	49.6	14.6	5 51 39.5	4.4	23.4
*6		2084 A. S. C.	5	+76 58		31.2	5 56 07.5	43.6	
7		761 A. S. C.	5	+69 22	7.7	10.1	6 01 11.5	13.0	14.5
8		η Geminorum	4.5	+22 33	16.6	40.2	6 05 03.9	27.5	51.1
9	30	μ Geminorum	3	+22 35	19.3	42.7	6 13 06.1	29.5	53.0
10		ε Geminorum	3	+25 17	6.5	30.5	6 33 54.5	18.5	42.5
11		α Canis Maj.	1	—16 30	7.5	0.2	6 37 52.8	15.5	38.1
12		Moon II	(18.0)	+24 55	42.6	7.0	6 58 31.5	56.0	20.5
13		α Canis Min.	1.2	+ 5 38	0.0	21.7	7 30 43.5	5.2	27.0
14		β Geminorum	2	+28 24	31.5	56.1	7 35 20.8	45.5	10.1
15	Dec. 1	δ Geminorum	3.4	+22 16	35.0	58.5	7 10 22.0	45.3	8.8
*16		59 Geminorum	6.7	+27 56	35.0	59.6	7 14 24.1	48.6	13.2
17		β Canis Min.	3	+ 8 36	31.5	53.5	7 18 15.8	37.2	59.1
*18		924 A. S. C.	6	—28 50	33.4	58.1	7 21 22.6	47.3	12.0
19		υ Geminorum	5	+27 15	2.6	27.2	7 25 51.6	16.0	40.4
*20		α Canis Min.	1.2	+ 5 38	58.2	20.0	7 30 41.7	3.5	25.2
21		β Geminorum	2	+28 24	29.7	54.2	7 35 18.7	43.3	8.5
22		B Geminorum	7	+23 32	59.5	23.2	7 38 46.7	10.3	34.0
*23		ξ Argus	4	—24 28	31.0	54.8	7 42 18.6	42.4	6.3
24		l Geminorum	6.7	+20 18	20.5	43.6	7 46 06.7	29.9	53.1
*25		11 Argus	5.6	—22 27	57.0	20.5	7 49 43.9	7.3	30.7
26		6 Cancri	6	+28 14	39.6	4.2	7 53 28.8	53.5	18.1
27		55 Camelop.	5.6	+68 55		43.0	7 56 43.5	44.2	
28		15 Argus	3.4	—23 51	41.4	5.0	8 00 28.7	52.3	16.0
29		Moon II	(19.1)	+21 37	39.2	2.9	8 02 26.6	50.3	14.1
30		20 Argus	6	—15 19	59.0	21.5	8 05 44.1	6.5	29.0
31		21 Argus	6.7	—15 48	3.0	25.6	8 09 48.2	10.7	33.2
32		d^1 Cancri	6	+18 50	13.0	35.9	8 13 58.8	21.7	44.6
*33		υ^1 Cancri	7.8	+25 03	8.0	32.0	8 16 55.9	19.8	44.0
34		θ Cancri	5.6	+18 38	29.2	52.1	8 22 15.0	38.1	41.0
35		π^2 Ursæ Maj.	5	+64 52	20.5	11.5	8 26 02.5	53.5	44.7
*36		39 Cancri	6	+20 34	54.2	17.5	8 30 40.7	3.9	27.1
37		δ Cancri	4.5	+18 44	36.0	59.0	8 35 22.0	44.9	7.8
38		ε Hydræ	4	+ 7 00	20.3	42.1	8 38 03.9	25.8	47.7
39	3	q Cancri	6	+18 23	1.5	24.3	9 09 47.2	10.1	33.0
40		θ Pixid. Naut.	5	—25 17	19.5	48.6	9 14 07.5	31.6	55.6
41		α Hydræ	2	— 7 58	43.2	35.1	9 19 26.9	48.8	10.7
42		λ Leonis	5	+23 40	32.0	55.8	9 22 19.5	43.1	6.9
*43		β Cephei	3	+69 52	4.5	8.0	9 26 11.5	14.0	17.5
44		ο Leonis	4	+10 37	35.8	58.1	9 32 20.0	42.1	4.2
45		ε Leonis	3	+24 30	42.2	6.0	9 36 29.7	53.5	17.3
46		20 Leonis	7	+21 55	49.5	12.9	9 40 36.2	59.6	23.0
47		d Sextantis	6	— 7 22	34.6	56.5	9 44 18.4	40.3	2.2
48		10 Sextantis	6.7	+ 9 41	56.4	18.5	9 47 40.5	2.5	24.5
49		π Leonis	4.5	+ 8 49	45.1	7.0	9 51 28.9	50.8	12.7
50		1199 A. S. C.	7.8	—12 32	46.3	8.5	9 54 30.7	53.0	15.2

November 30.—Calm. A dense fog. Temperature 13° Fahrenheit.
December 1.—The instrumental adjustments were examined.
3.—Found the transit covered with moisture, from sudden change of temperature. No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
5	16	02.64	+ .068	—0	17.96	—0	18.16	—1.49	5	16	20.87	1
5	23	39.72	+ .211		18.15		.16		5	23	58.09	*2
5	25	29.00	+ .294	—0	18.42		.15		5	25	47.44	3
5	29	40.78	+ .084				.15		5	29	59.01	4
5	51	39.50	+ .081				.12		5	51	57.70	5
5	56	07.43	+1.329				.12		17	56	26.88	*6
6	01	11.36	— .475				.11		6	01	29.00	7
6	05	03.86	+ .102			—0	18.11	—1.49	6	05	22.07	8
6	13	06.12	+ .101	—0	19.85	—0	19.69	—1.45	6	13	25.91	9
6	33	54.50	+ .087				.67		6	34	14.26	10
6	37	52.82	+ .286		19.80		.67		6	38	12.78	11
6	58	31.52	+ .092				.65		6	58	51.26	12
7	30	43.48	+ .183		19.72		.62		7	31	03.28	13
7	35	20.80	+ .069	—0	19.49	—0	19.62	—1.45	7	35	40.49	14
7	10	21.92	+ .247	—0	20.71	—0	21.15	—1.42	7	10	43.32	15
7	14	24.10	+ .172				.15		7	14	45.42	*16
7	18	15.32	+ .408				.15		7	18	36.88	17
7	21	22.68	+ .844				.14		7	21	44.66	*18
7	25	51.56	+ .181				.14		7	26	12.88	19
7	30	41.72	+ .440		21.10		.13		7	31	03.29	*20
7	35	18.88	+ .165		21.28		.13		7	35	40.17	21
7	38	46.74	+ .229				.13		7	39	08.10	22
7	42	18.62	+ .786				.12		7	42	40.53	*23
7	46	06.76	+ .271				.12		7	46	28.15	24
7	49	43.88	+ .760				.12		7	50	05.76	*25
7	53	28.84	+ .167				.11		7	53	50.12	26
7	56	43.56	+1.113				.11		7	57	05.78	27
8	00	28.68	+ .778		21.13		.11		8	00	50.57	28
8	02	26.62	+ .254				.10		8	02	47.97	29
8	05	44.02	+ .673				.10		8	06	05.79	30
8	09	48.14	+ .678				.10		8	10	09.92	31
8	13	58.80	+ .290				.09		8	14	20.18	32
8	16	55.94	+ .212				.09		8	17	17.24	*33
8	22	15.08	+ .292				.09		8	22	36.46	34
8	26	02.54	— .825				.08		8	26	22.80	35
8	30	40.68	+ .268				.08		8	31	02.03	*36
8	35	21.94	+ .291				.07		8	35	43.30	37
8	38	03.96	+ .426	—0	21.39	—0	21.07	—1.42	8	38	25.46	38
9	09	47.22	— .148			—0	23.99	—1.27	9	10	11.06	39
9	14	07.56	— .398				.98		9	14	31.14	40
9	19	26.94	— .295	—0	23.90		.98		9	19	50.63	41
9	22	19.46	— .114				.98		9	22	43.33	42
9	26	11.10	—1.100				.97		21	26	33.97	*43
9	32	20.04	— .192				.97		9	32	43.82	44
9	36	29.74	— .109	—0	24.01		.96		9	36	53.59	45
9	40	36.24	— .125				.96		9	41	00.08	46
9	44	18.40	— .291				.96		9	44	42.07	47
9	47	40.48	— .198				.95		9	48	04.23	48
9	51	28.90	— .203				.95		9	51	52.65	49
9	54	30.74	— .320			—0	23.95	—1.27	9	54	54.37	50

Nos. 2, 16, 18, 20, 23 25. Two stars in the field of the instrument.
6, 43. 2084 A. S. C. and β Cephei, sub-polo.
33. v^1 Cancri double; the smaller star of the 8th magnitude.
36. Five stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 3	Moon II	(21.2)	+11°14′	24.5	46.8	9 58 09.3	31.8	54.4
2	cont'd.	α Leonis	1	+12 44		12.2	9 59 34.4	56.7	19.0
3		1215 A. S. C.	6	− 6 32	17.6	39.5	10 03 01.4	23.3	45.1
4		1220 A. S. C.	6	+18 32	30.8	53.5	10 07 16.5	39.2	2.2
5		γ Leonis	2	+20 39	6.1	29.5	10 10 52.4	15.5	38.8
6		z Leonis	6	+ 7 21	37.5	59.5	10 14 21.3	43.2	5.0
*7		μ Hydræ	4	−16 02		41.5	10 18 04.1	26.7	
8		k Sextantis	6	− 1 55	20.5	42.4	10 21 04.1	25.9	47.6
9		ρ Leonis	4	+10 07	22 2	44.2	10 24 06.3	28.3	50 3
10	5	χ Leonis	4	+ 8 12	42.2	4.2	10 56 26.1	48.1	10.0
11		67 Leonis	6	+25 31			10 59 54.2	18.2	42.4
12		δ Leonis	3	+21 23	29.5	53.0	11 05 16.2	49.5	2.8
13		Leonis	7	+12 49	55.9	18.2	11 09 40.5	2.8	25.0
14		σ Leonis	4	+ 6 54	49.6	11.5	11 12 33.3	55.1	17.1
15		ε Hyd.& Crat.	5	− 9 59	27.8	50.0	11 16 12.0	34.0	56.1
*16		κ Hyd.& Crat.	6	−11 29	1.9	24.0	11 18 46.1	8.3	30.5
17		e Leonis	4.5	− 2 07	5.0	26.8	11 21 48.6	10.3	32.1
18		ξ Hyd.& Crat.	4	−30 59	57.9	23.1	11 24 48.4	13.7	39 2
19		υ Leonis	4.5	+ 0 03	42.4	4.1	11 28 25.8	47.4	9.3
*20		γ Cephei		+76 45		55.5	11 32 29.5	3.5	
21		ζ Hyd.& Crat	4	−17 28	33.7	56.6	11 36 19.3	42.1	4.9
22		β Leonis	2.3	+15 27	48.8	11.2	11 40 33.7	56.2	18.7
23		Moon II	(23.2)	− 1 22	36.0	58.3	11 42 20.3	42.4	4.6
24		γ Ursæ Maj.	3	+54 34	48.7	26.5	11 45 03.8	41.2	18.5
25		b Virginis	5.6	+ 4 32	41.3	3.2	11 51 25.0	46.9	8.6
26		1390 A. S. C.	7	+ 6 26	30.5	52.4	11 55 14.2	36.0	57.8
27		α Corvi	4.5	−23 50	2.6	26.5	11 59 50.3	14.0	37.6
28		4 Comæ Ber.	6	+26 45	35.0	59.4	12 03 23.8	48.1	12.4
29		δ Ursæ Maj.	3	+57 55	46.5	27.5	12 07 08.5	49.5	30.5
30		η Virginis	3.4	+ 0 13	39.6	1.5	12 11 23.2	44.9	6.6
31	12	α Pegasi	2	+14 22	20.0	42.5	22 57 04.7	27.2	49.6
32		c^2 Aquarii	4.5	−22 02	25.7	49.1	23 01 12.5	35.9	59.4
33		60 Pegasi	6	+25 59	32.7	56.9	23 04 21.0	45.2	9.4
34		γ Piscium	4.5	+ 2 25	26 5	48.2	23 09 10.0	31.8	53.5
35		T Aquarii	6	−27 51	12.2	36.9	23 13 01.5	26.1	50.6
36		2793 A. S. C.	6.7	−22 38	8.9	32.5	23 15 56.0	19.5	43.0
*37		κ^2 Piscium	6	+ 0 15	37.5	59.2	23 19 20.9	42.6	4.2
38		w^3 Piscium	7	− 1 58	19.5	41.0	23 24 02.8	24.6	46.3
39		15 Piscium	7	+ 0 26	52.4	14.1	23 27 35.7	57.5	19.2
*40		γ Cephei	3	+76 45		28.9	23 33 03.5	38.5	
41		m Piscium	6	+ 2 36	47.4	9.1	23 38 30.8	52.5	14.2
42		79 Pegasi	6	+27 57	2.5	27.0	23 41 51.6	16.2	41.0
43		25 Piscium	6.7	+ 1 12	27.5	49.2	23 45 10.9	32.6	54.3
44		ψ Pegasi	5.6	+24 15	7.0	30.8	23 49 54.5	18.3	42.3
45		q Piscium	5.6	− 3 55	11.7	33.5	23 53 55.2	17.0	38.8
46		s Piscium	5	− 6 36	42.8	4.7	23 57 26.5	48.5	10.4
47		α Andromedæ	1	+28 13	36.5	1.0	0 00 25.6	50.3	15.0
48		γ Pegasi	2.3	+14 18	33.5	55.8	0 05 18.1	40 5	2.9
*49		36 Piscium	6.7	+ 7 21	55.2	17.1	0 08 39.0	1.0	22.9
50		d Piscium	5.6	+ 7 18	56.5	18.2	0 12 40.1	2.8	24.0
51		α Phœnicis	2	−43 10	40.5	10.5	0 18 40.3	10.0	39.8

December 9.—No error of level or collimation. Stopped the clock, and shortened the pendulum 0.9 division.
12--.Collimation and level unchanged.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
9	58	09.36	— .189			—0	23.94	—1.27	9	58	33.11	1
9	59	34.44	— .181	—0	23.98		.94		9	59	58.20	2
10	03	01.36	— .286				.94		10	03	25.01	3
10	07	16.44	— .147				.93		10	07	40.22	4
10	10	52.46	— .134				.93		10	11	16.26	5
10	14	21.30	— .211				.93		10	14	45.02	6
10	18	04.10	— .340				.92		10	18	27.68	*7
10	21	04.10	— .262				.92		10	21	27.76	8
10	24	06.26	— .195			—0	23.92	—1.27	10	24	29.99	9
10	56	26.12	— .057			—0	26.42	—1.17	10	56	52.48	10
10	59	54.21	— .028				.42		11	00	20.60	11
11	05	16.20	— .035	—0	26.38		.41		11	05	42.58	12
11	09	40.48	— .049				.41		11	10	06.84	13
11	12	33.32	— .059				.41		11	12	59.67	14
11	16	11.98	— .084				.41		11	16	38.31	15
11	18	46.16	— .086				.40		11	19	12.47	*16
11	21	48.56	— .072				.40		11	22	14.89	17
11	24	48.46	— .120				.40		11	25	14.74	18
11	28	25.78	— .069				.40		11	28	52.11	19
11	32	29.50	— .479		26.27		.39		23	32	55.41	*20
11	36	19.30	— .096				.39		11	36	45.59	21
11	40	33.72	— .045		26.62		.39		11	41	00.07	22
11	42	20.32	— .071				.39		11	42	46.64	23
11	45	03.74	+ .051	—0	26.27		.38		11	45	30.17	24
11	51	25.00	— .062				.38		11	51	51.32	25
11	55	14.18	— .059				.38		11	55	40.50	26
11	59	50.20	— .107				.37		12	00	16.46	27
12	03	23.74	— .026				.37		12	03	50.08	28
12	07	08.50	— .067				.37		12	07	34.80	29
12	11	23.16	— .069			—0	26.36	—1.17	12	11	49.45	30
22	57	04.80	— .258	+0	10.42	+0	10.62	+0.43	22	56	53.92	31
23	01	12 52	— .565				.62		23	01	01.34	32
23	04	21.04	— .149				.62		23	04	10.27	33
23	09	10.00	— .356				.63		23	08	59.01	34
23	13	01.46	— .623				.63		23	12	50.21	35
23	15	55.98	— .571				.63		23	15	44.78	36
23	19	20.88	— .374				.63		23	19	09.88	*37
23	24	02.84	— .393				.63		23	23	51.82	38
23	27	35.78	— .373				.63		23	27	24.78	39
23	33	03.63	+1.605		10.50		.63		23	32	54.60	*40
23	38	30.80	— .358				.63		23	38	19.81	41
23	41	51.66	— .129				.63		23	41	40.90	42
23	45	10.90	— .366				.64		23	44	59.89	43
23	49	54.56	— .166				.64		23	49	43.75	44
23	53	55.24	— .409				.64		23	53	44.19	45
23	57	26.58	— .431				.64		23	57	15.51	46
0	00	25.68	— .125		10.94		.64		0	00	14.92	47
0	05	18.16	— .258	+0	10.61		.64		0	05	07.26	48
0	08	39.04	— .316				.64		0	08	28.08	*49
0	12	40.16	— .316				.64		0	12	29.20	50
0	18	40.22	— .712			+0	10.65	+0.43	0	18	28.86	51

No. 7. Clouds.
16, 37. 49. Two stars in the field of the instrument.
20, 40. γ Cephei, sub-polo. It is also recorded double at the first observation.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Dec. 18	ζ Cygni	3	+29°35′	35.5	0.6	21 06 25.5	50.5	15.5
2		α Cephei	3	+61 55	27.5	14.0	21 15 00.0	46.0	32.0
3		β Aquarii	3	— 6 16	43.8	5.5	21 23 27.4	49.3	11.2
4		β Cephei	3	+69 52		43 5	21 26 46.2	49.5	52.6
5		ε Pegasi	2.3	+ 9 09	54.7	16.7	21 36 38.8	0.7	22.7
6		δ Capricorni	3.4	—16 50	45 0	9.5	21 38 32.0	54.5	17.2
7		α Aquarii	3	— 1 05	10.1	31.7	21 57 53.4	15.1	36.8
8		θ Pegasi	4	+ 5 25	43.5	5.4	22 02 27.2	49.0	10.7
9		ζ Cephei	4	+57 25	14.5	55.2	22 05 35.1	15.9	56.7
10		θ Aquarii	4.5	— 8 34	59.0	21.0	22 08 42.9	4.8	26.7
11		Moon I	(5.9)	— 9 00	29.6	52.2	22 13 14.5	37.0	59.3
12		π Aquarii	5	+ 0 34	42.2	4.0	22 17 25.8	47.5	9.3
*13		ζ Aquarii		— 0 50	11.5	33.2	22 20 55.0	16.7	38.5
14		δ Cephei	4.5	+57 36	10.0	50.7	22 23 31.5	12.0	52.6
15		η Aquarii	4	— 0 56	44.2	6.9	22 27 27.6	49.2	11.0
16		ζ Pegasi	3	+10 00	4.3	26.8	22 33 48.2	10.1	32.8
*17	19	γ Aquarii	4	— 2 11		21.5	22 13 43.0	4.7	
18	26	υ¹ Tauri	5	+22 27	22.6	46.0	4 17 09.3	32.7	56.2
*19		η Draconis	3	+61 52	34.3	20.3	4 22 06.2	52.3	38.5
20		α Tauri	1	+16 11	23.8	46.5	4 27 09.0	31.6	54.2
21		c Eridani	6	— 2 47	13.2	35.0	4 29 56.6	8.4	40.2
*22		τ Tauri	5	+22 39	16.6	40.2	4 33 03.7	27.2	50.8
23		β Cœli Sculp.	5	—37 27	51.9	19.3	4 36 46.5	13.8	41.1
24		58 Eridani	6	—17 13	3.1	25.8	4 40 48.5	11.2	34.0
25		b Camelop.	5	+53 30	44.2	20.5	4 44 57.4	33.8	10.1
*26		d¹ Camelop.	4.5	+60 12	15.0	59.0	4 49 42.5	26.0	9.6
27		ψ Eridani	5	— 7 24	20.7	42.8	4 54 04 7	26.6	48.3
28		m Tauri	5	+13 26	39.0	1.9	4 58 24.7	47.6	10.5
*29		ε Ursæ Min.	4	+82 17			5 02 30.5		
*30		β Orionis	1	— 8 23	30.5	52.5	5 07 14.5	36.4	58.5
31		τ Orionis	4	— 7 01	30.3	52.2	5 10 14.0	35.8	57.6
32		Moon I	(14 2)	+26 23	58.0	23.1	5 14 48.0	12.9	37.9
33		β Tauri	2	+28 28		11.8	5 16 36.5	1.2	25.8
34		β Leporis	4	—20 53	0.0	23.2	5 21 46.5	9.7	33.0
35		α Leporis	3.4	—17 56	18.0	40.8	5 26 03.6	26.3	49.1
36		ε Orionis	2.3	— 1 18	46.2	8.1	5 28 29.8	51.5	13 2
37		α Columbæ	2	—34 10	21.2	47.5	5 34 13.7	40.0	'6.2
*38		γ Leporis	4	—22 30	23.6	47.2	5 38 10.6	34.0	57.6
39		C Tauri	5	+27 34	53.0	17.5	5 43 42.0	6.5	31.1
*40	28	δ Ursæ Min.	3	+86 35			6 23 11.5		
41		51(Hev.)Cephei	5	+87 16			6 25 12.5		
42		ν² Canis Maj.	5	—19 07	20.5	43.5	6 30 06.6	29.5	52.5
43		ε Geminorum	3	+25 17	43.5	7.7	6 34 31.6	55.7	19.7
44		α Canis Maj.	1	—16 30	44.5	7.5	6 38 29.7	42.5	14.9
*45		x Arg in pup.	5	—37 45	21.0	48.6	6 42 16.0	43.4	10.9
*46		ι Canis Maj.	4.5	—16 51	39 5	1.5	6 49 24.3		9.5
47		ε Canis Maj.	2.3	—28 45		19.5	6 52 44.0	8.6	
48		ζ Geminorum	4	+20 48	16.5	39.9	6 55 03.2	26.5	49.7
49		ο Geminorum	6	+16 11	52.0	14.5	6 59 37.2	59.8	22.4
50		m Monocerotis	4.5	— 0 14	23.0	44.8	7 04 06.5	28.2	50.0

December 19 --Observations interrupted by clouds.
26.--The adjustments of the transit were examined.
28.--Clouds at observation of ι and ε Canis Majoris.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
21	06	25.52	+ .010	+0	13.11	+0	13.16	+0 43	21	06	12.37	1
21	14	59.90	— .049		13.60		.16		21	14	46.69	2
21	23	27.44	+ .042		13.23		.16		21	23	14.32	3
21	26	46.40	— .089		13.22		.16		21	26	33.15	4
21	36	38.72	+ .031		13.20		.16		21	36	25.59	5
21	38	32.04	+ .052				.17		21	38	18.92	6
21	57	53.40	+ .038		13.28		.17		21	57	40.27	7
22	02	27.16	+ .033				.17		22	02	14.02	8
22	05	35.48	— .354				.17		22	05	21.96	9
22	08	42.88	+ .045				.18		22	08	29.74	10
22	13	14.52	+ .045				.18		22	13	01.38	11
22	17	25.76	+ .037				.18		22	17	12.62	12
22	20	54.98	+ .038				.18		22	20	41.84	*13
22	23	31.36	— .359				.18		22	23	17.82	14
22	27	27.56	+ .038				.18		22	27	14.44	15
22	33	48.34	+ .029	+0	13.15	+0	13.18	+0.43	22	33	35.19	16
22	13	43.07	+ .039			+0	13.61	+0.43	22	13	29.50	*17
4	17	09.36	— .168			+0	15.11	+0.40	4	16	54.08	18
4	22	06.32	—1.146	+0	15.54		.11		16	21	50.06	*19
4	27	09.02	— .221		15.01		.11		4	26	53.69	20
4	29	56.68	— .366				.11		4	29	41.20	21
4	33	03.70	— .166				.11		4	32	48.42	*22
4	36	46.52	— .674				.11		4	36	30.74	23
4	40	48.52	— .478				.12		4	40	32.92	24
4	44	57.20	+ .233				.12		4	44	42.31	25
4	49	42.42	+ .402				.12		4	49	27.70	*26
4	54	04 62	— .400				.12		4	53	49.10	27
4	58	24.74	— .202				.12		4	58	09.42	28
5	02	30.50	—3.507		15.65		.12		17	02	11.87	*29
5	07	14.48	— .408		15.10		.12		5	06	58.95	*30
5	10	13.98	— .398				.12		5	09	58.46	31
5	14	47.98	— .133				.12		5	14	32.73	32
5	16	36.48	— .153		15.27		.13		5	16	21.20	33
5	21	46.48	— .508				.13		5	21	30.84	34
5	26	03.56	— .480		15.10		.13		5	25	47.95	35
5	28	29.76	— .355		15.30		.13		5	28	14.28	36
5	34	13.72	— .619	+0	15.01		.13		5	33	57.97	37
5	38	10.60	— .522				.13		5	37	54.95	*38
5	43	42.02	— .122			+0	15.13	+0.40	5	43	26.77	39
6	23	11.50	—6.814	+0	15.60	+0	16.23	+0.52	18	22	48.46	*40
6	25	12.50	+7.824		15.54		.23		6	25	04.09	41
6	30	06.52	— .449				.23		6	29	49.84	42
6	34	31.64	— .130				.23		6	34	15.28	43
6	38	29.82	— .429		16.03		.23		6	38	13.16	44
6	42	15.98	— .615				.24		6	41	59.13	*45
6	49	24.37	— .431				.24		6	49	07.70	*46
6	52	44.03	— .527	+0	16.24		.24		6	52	27.26	47
6	55	03.16	— .166				.24		6	54	46.75	48
6	59	37.18	— .201				.24		6	59	20.74	49
7	04	06.50	— .315			+0	16.24	+0.52	7	03	49.95	50

No. 13. ζ Aquarii is a double star.

19, 22, 26, 30. 38, 45. Two stars in the field of the instrument.

TRANSITS OBSERVED AT WASHINGTON IN 1841.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V
					s.	s.	h. m. s.	s.	s.
1	Dec. 28	δ Geminorum	3.4	+22°16′	13.0	36.6	7 11 00.0	23.5	46.9
2	cont'd.	β Canis Min.	3	+ 8 36	9.6	31.1	7 18 53.5	15.5	37.5
3		α Canis Min.	1.2	+ 5 37	36.8	58.6	7 31 20.4	42.2	4.0
4		Moon II	(16.3)	+23 22	35.7	0.2	7 33 24.5	48.7	12.9
5		ϑ Geminorum	2	+28 24	8.0	32.9	7 35 57.5	22.1	47.0
*6	30	ν Cancri	6	+25 04	1.5	25.5	8 53 49.5	13.5	37.4
7		ω Hydræ	6	+ 5 43	15.0	36.9	8 57 58 7	20.5	42.4
8		K¹ Hydræ	6	— 6 27	13.7	35.6	9 04 57.5	19.4	41.2
9		K² Hydræ	6	— 5 42	26.8	48.6	9 09 10.4	32.2	54.0
10		α Hydræ	2	— 7 59	25.0	47.0	9 20 08.8	30.7	52.6
11		λ Leonis	4.5	+23 40	14.0	37.6	9 23 01.4	25.2	48.8
12		ι Hydræ	6	— 0 25	23.0	44.7	9 32 06.5	28.3	50.0
13		Moon II	(18.4)	+13 30	9.4	32.2	9 36 54.9	17.5	40.3
*14		ν Leonis	5.6	+13 12	17.8	40.1	9 50 02.5	24.8	47.2
15		1198 A. S. C.	6.7	+22 43	32.4	55.9	9 54 19.3	42.8	6.3
16		α Leonis	1	+12 44	32.0	54.3	10 00 16.5	38.7	1.1
17	31	ν Leonis	6	+13 12	18.7	41.0	9 50 03.3	25.5	47.7
18		1198 A. S. C.	6.7	+22 43	63.0	56.5	9 54 20.0	43.5	7.0
19		1202 A. S. C.	7	+16 32	40.9	3.5	9 57 26.2	48.9	11.5
*20		α Leonis	1	+12 44	32.5	54.8	10 00 17.0	39.3	1.5
*21		1215 A. S. C.	7	— 6 32	0.5	22.4	10 03 44.2	6.1	28.0
22		1220 A. S. C.	7	+18 32	13.5	36.2	10 07 59.2	22.2	45.0
23		γ Leonis	2	+20 39	48.9	12.1	10 11 35.3	58.5	21.7
24		z Leonis	6.7	+ 7 21	20.3	42.2	10 15 04.1	26.0	48.0
25		α Antl. Pneu.	4.5	—30 16	25.5	50.5	10 20 15.7	40 9	6.1
*26		x Sextantis	8	+ 5 28	42.2	4.1	10 24 25.8	47.6	9.3
27		1 Hyd. & Crat	6	—15 31	9.2	31.6	10 28 54.0	16.5	38.9
28		Moon II	(19.5)	+ 7 11	1.5	23.9	10 32 46.2	8.5	30.9
29		34 Sextantis	6	+ 4 25	4.3	26.0	10 34 47.8	9.6	31.3
30		k Leonis	6	+15 02	38.0	0.2	10 38 22.7	45.2	7.7
31		ν Hyd. & Crat.	4	—15 22	24.7	47.4	10 42 09.7	32.2	54.7
32		b³ Hyd. & Crat.	5.6	—19 17	19.6	42.8	10 46 05.8	28.8	51.8
33		1299 A. S. C.	5	—36 17	48.0	14.9	10 49 41.7	8.6	35.6
*34		α Ursæ Maj.	1.2	+62 36	41.7	29.0	10 54 16.0	3.4	50.6
35		χ Leonis	5.6	+ 8 12	27.5	49.5	10 57 11.5	33.5	55.5

December 30.— No error of collimation or level.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
7	11	00.00	— .155	+0	16.34	+0	16.25	+0.52	7	10	43.60	1
7	18	53.52	— .255				.25		7	18	37.02	2
7	31	20.40	— .275		16.26		.25		7	31	03.88	3
7	33	24.40	— .145				.25		7	33	08.01	4
7	35	57.50	— .103	+0	16.36	+0	16.25	+0.52	7	35	41.15	5
8	53	49.48	— .088			+0	17.29	+0.60	8	53	32.10	*6
8	57	58.70	— .183				.29		8	57	41.23	7
9	04	57.48	— .239				.29		9	04	39.95	8
9	09	10.40	— .235				.29		9	08	52.88	9
9	20	08.82	— .246	+0	17.24		.29		9	19	51.28	10
9	23	01.40	— .096				.30		9	22	44.00	11
9	32	06.50	— .211				.30		9	31	48.99	12
9	36	54.86	— .147				.30		9	36	37.41	13
9	50	02.48	— .145				.30		9	49	45.04	*14
9	54	19.34	— .100				.31		9	54	01.93	15
10	00	16.52	— .151	+0	17.25	+0	17.31	+0.60	9	59	59.06	16
9	50	03.24	— .100			+0	18.02	+0.71	9	49	45.12	17
9	54	20.00	— .069				.02		9	54	01.91	18
9	57	26.20	— .091				.02		9	57	08.09	19
10	00	17.02	— .104	+0	17.77		.02		9	59	58.90	*20
10	03	44.24	— .165				.02		10	03	26.06	*21
10	07	59.22	— .084				.03		10	07	41.11	22
10	11	35.30	— .077				.03		10	11	17.19	23
10	15	04.12	— .121				.03		10	14	45.97	24
10	20	15.74	— .291				.03		10	19	57.42	25
10	24	25.80	— .127				.03		10	24	07.64	*26
10	28	54 04	— .194				.04		10	28	35.81	27
10	32	46.20	— .123				.04		10	32	28.04	28
10	34	47.80	— .130				.04		10	34	29.63	29
10	38	22.76	— .097				.04		10	38	04.62	30
10	42	09.74	— .193				.04		10	41	51.51	31
10	46	05.76	— .207				.04		10	45	47.51	32
10	49	41.76	— .275				.05		10	49	23.44	33
10	54	16.14	+ .201	+0	18.03		.05		10	53	58.29	*34
10	57	11.50	— .119			+0	18.05	+0.71	10	56	53.33	35

No. 6. Passing clouds.
14. Scarcely visible.
20, 34. Two stars in the field of the instrument.
21. 1215 A. S. C. double; smaller star of the 8th magnitude.
26. Recorded 10*h.* 23*m.* at transit over middle wire.

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1841.
				h. m. s.	s.	h. m. s.
Aug. 5	21 Andromedæ α	1	5	0 00 14.24	+3.468	0 00 10.77
6		1	5	14.63	.493	11.14
Sept. 2		1	5	14.87	4.042	10 83
30		1	5	15.19	.299	10.89
Oct. 26		1	5	15.03	.277	10.75
27		1	5	15.01	.271	10.74
Nov. 23		1	3	14.86	.051	10.81
24		1	5	14.89	.039	10.85
Dec. 12		1	5	14.92	3.824	11.10
Means		1				0 00 10.876
Aug. 6	88 Pegasi γ	2.3	5	0 05 06.78	+3.498	0 05 03.28
Sept. 2		2.3	5	07.29	4.034	03.26
30		2.3	5	07.39	.294	03.10
Oct. 27		2.3	5	07.60	.293	03.31
Nov. 23		2.3	5	07.21	.114	03.11
24		2.3	5	07.24	.105	03.14
Dec. 12		2.3	5	07.26	3.926	03.33
Means		2.3				0 05 03.217
Sept. 30	36 Piscium	6.7	5	0 08 28.45	+4.316	0 08 24.13
Oct. 27		6.7	5	28.50	.326	24.17
Nov. 23		6.7	5	28.17	.156	24.01
24		6.7	5	28.23	.148	24.08
Dec. 12		6.7	5	28.08	3.976	24.10
Means		6.7				0 08 24.098
Aug. 6	19 A. S. C.	6.7	5	0 09 41.08	+3.540	0 09 37.54
Sept. 2		6.7	5	41.86	4.078	37.78
Means		6.7				0 09 37.660
Oct. 27	40 Piscium	6.7	5	0 11 48.01	+4.325	0 11 43.685
Aug. 6	41 Piscium d	6	5	0 12 28.63	+3.497	0 12 25.13
Sept. 30		5.6	5	29.47	4.322	25.15
Nov. 23		5.6	5	29.25	.180	25.07
24		5.6	5	29.33	.172	25.16
Dec. 12		5.6	5	29.20	3.999	25.20
Means		5.6				0 12 25.143
Sept. 30	9 Ceti	6	5	0 14 47.14	+4.462	0 14 42.68
Oct. 27		6.7	5	47.39	469	42.92
Means		6				0 14 42.800
Aug. 6	26 A. S. C.	6.7	5	0 16 25.76	+3.531	0 16 22.229

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1841.
				h. m. s.	s.	h. m. s.
Sept. 2	Phœnicis α	2	5	0 18 29.44	+4.769	0 18 24.67
30		2	5	29.51	5.093	24.42
Nov. 24		2	5	29.36	4.657	24.70
Dec. 12		2	5	28.86	.330	24.53
Means		2				0 18 24.580
Oct. 27	48 Piscium	6	5	0 20 01.91	+4.366	0 19 57.544
Sept. 2	12 Ceti η	6	5	0 21 59.67	+4.081	0 21 55.59
Nov. 24		6.7	5	59.73	.259	55.47
Means		6				0 21 55.530
Sept. 30	38 A. S. C.	6	5	0 22 29.73	+4.606	0 22 25.124
Sept. 2	52 Piscium	6	5	0 24 19.86	+4.021	0 24 15.839
Nov. 24	47 A. S. C.	7	5	0 26 01.03	+4.251	0 25 56.779
Sept. 30	13 Ceti	6	5	0 27 08.20	+4.382	0 27 03.82
Oct. 27		6	5	08.47	.431	04.04
Means		6				0 27 03.930
Sept. 2	51 A. S. C.	6	5	0 27 27.18	+4.048	0 27 23.132
Aug. 6	18 Cassiopeæ α	3	5	0 31 34.94	+3.681	0 31 31.26
7		3	5	35.24	.719	31.52
Sept. 2		3	5	35.78	4.544	31.24
30		3	5	36.47	5.011	31.46
Oct. 27		3	5	36.34	.050	31.29
Nov. 24		3	5	36.08	4.701	31.38
Means		3				0 31 31.358
Aug. 6	16 Ceti β	2.3	5	0 35 39.78	+3.583	0 35 36.25
7		2.3	5	40.02	.561	36.46
Sept. 2		2.3	5	40.44	4.149	36.29
30		2.3	5	40.68	.494	36.19
Oct. 27		2.3	5	40.82	.547	36.27
Nov. 24		2.3	5	40.72	.381	36.34
Means		2.3				0 35 36.300
Sept. 30	34 Andromedæ ζ	5	5	0 38 59.64	+4.397	0 38 55.243
Nov. 24	60 Piscium	6	5	0 39 14.78	+4.327	0 39 10.453
Aug. 6	63 Piscium δ	5	5	0 40 29.58	+3.386	0 40 26.19
7		5	5	29.75	.413	26.34
Sept. 2		5	5	30.29	.991	26.30

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1 1841.
				h. m. s.	s.	h. m. s.
Oct. 27	63 Piscium δ	5	5	0 40 30.79	+4.441	0 40 26.35
Means		5				0 40 26.295
Sept. 30	19 Ceti ϕ^2	6	5	0 42 13.89	+4.414	0 42 09.48
Nov. 24		6	5	14.31	.365	09.94
Means		6				0 42 09.710
Aug. 6	20 Ceti m	5	5	0 44 56.32	+3.385	0 44 52.94
7		5	5	56.39	.413	52.98
Means		5				0 44 52.956
Nov. 24	36 Andromedæ	6	5	0 46 32.33	+4.430	0 46 27.900
Aug. 6	22 Ceti ϕ^3	6	5	0 48 06.23	+3.409	0 48 02.82
7		6	5	06.48	.437	03.04
Means		6				0 48 02.932
Sept. 30	23 Ceti ϕ^4	6	5	0 50 50.34	+4.408	0 50 45.93
Oct. 1		6	5	50.81	.413	46.40
Means		6				0 50 46.164
Aug. 6	App. Sculp. α	5	5	0 50 59.67	+3.519	0 50 56.15
7		5	5	59.92	.549	56.37
Means		5				0 50 56.261
Aug. 6	71 Piscium ε	4	5	0 54 45.08	+3.323	0 54 41.76
7		4	5	45.05	.351	41.70
Sept. 30		4	5	45.97	4.355	41.62
Oct. 1		4	5	46.38	.364	42.02
Means		4				0 54 41.775
Sept. 30	27 Ceti	6	5	0 57 43.11	+4.385	0 57 38.73
Oct. 1		6	5	43.50	.394	39.11
Means		6				0 57 38.915
Aug. 7	75 Piscium H	6.7	5	0 58 15.49	+3.338	0 58 12.152
Oct. 1	31 Ceti η	3.4	5	1 00 40.02	+4.391	1 00 35.629
May 14	1 Ursæ Min. α	2.3	1	1 01 38.75	—41.723	1 02 20.47
15		2.3	1	45.22	.124	26.34
16		2.3	1	46.30	40.517	26.82
20		2.3	1	49.36	38.014	27.37

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
May 31	1 Ursæ Min. *α*	2.3	1	1 01 56.71	—30.385	1 02 27.09
Aug. 7	cont'd.	2.3	1	02 49.59	+22.739	26.85
Sept. 30		2.3	1	15.09	48.736	26.35
Oct. 1		2.3	1	16.58	48.928	27.65
Means		2.3				1 02 26.117
Aug. 7	37 Ceti *b*	6	5	1 06 26.79	+3.311	1 06 23.479
Oct. 1	38 Ceti	6	5	1 06 46.82	+4.359	1 06 42.461
Aug. 7	89 Piscium *f*	6	5	1 09 39.30	+3.283	1 09 36.017
Oct. 1	90 Piscium *υ*	5.6	5	1 10 49.17	+4.514	1 10 44.656
Aug. 7	144 A. S. C.	7	5	1 14 29.12	+3.258	1 14 25.86
Oct. 1		7	5	30.43	4.353	26.08
Means		7				1 14 25.969
Oct. 1	45 Ceti *θ*¹	3	5	1 16 08.97	+4.353	1 16 04.62
Nov. 27		3	5	09.14	.457	04.68
Means		3				1 16 04.650
Oct. 1	157 A. S. C.	7	5	1 19 56.04	+4.422	1 19 51.618
Aug. 7	158 A. S. C.	7	5	1 20 06.01	+3.238	1 20 02.772
Jan. 2	99 Piscium *η*	4	5	1 22 59.82	+0.850	1 22 58.97
Aug. 7		4	5	23 01.92	3.245	58.68
Oct. 1		4	5	03.50	4.410	59.09
Means		4				1 22 58.913
Jan. 2	101 Piscium	6	5	1 27 17.65	+0.880	1 27 16.770
Aug. 7	173 A. S. C.	6	5	1 27 22.30	+3.235	1 27 19.065
Jan. 2	105 Piscium	6	5	1 31 07.53	+0.900	1 31 06.63
Aug. 7		6	5	09.70	3.215	06.48
Means		6				1 31 06.557
Jan. 2	109 Piscium	6.7	5	1 36 16.36	+0.918	1 36 15.442
Aug. 7	52 Ceti *τ*	3.4	5	1 36 44.01	+3.009	1 36 41.001
Oct. 29	110 Piscium *ο*	5	5	1 37 04.88	+4.612	1 37 00.268
Jan. 2	193 A. S. C.	6	5	1 41 23.12	+0.946	1 41 22.174

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1841.
				h. m. s.	s.	h. m. s.
Aug. 7	5 Arietis γ	5	5	1 44 52.17	+3.176	1 44 48.994
Jan. 2	6 Arietis β	3	5	1 45 53.03	+0.983	1 45 52.05
12		3	5	52.93	.867	52.06
Oct. 29		3	5	56.78	4.769	52.01
Nov. 27		3	5	57.23	.817	52.41
Means		3				1 45 52.132
Sept. 4	48 Cassiopeæ	5	3	1 49 05.72	+6.104	1 48 59.616
Jan. 2	9 Arietis λ	5.6	5	1 49 05.88	+0.998	1 49 04.882
Oct. 29	50 Cassiopeæ	4.5	5	1 50 06.99	+8.337	1 49 58.653
Jan. 2	113 Piscium α	5	5	1 53 50.57	+0.973	1 52 49.60
Oct. 29		5	5	53.91	4.595	49.32
Means		5				1 52 49.456
Jan. 2	13 Arietis α	3	5	1 58 14.40	+1.062	1 58 13.34
Sept. 4		3	5	17.30	3.959	13.34
5		3	5	17.36	.983	13.38
Oct 29		3	5	18.20	4.858	13.34
Means		3				1 58 13.350
Jan. 2	15 Arietis	6	5	2 01 50.63	+1.093	2 01 49.54
Sept. 4		6	5	53.25	3.904	49.35
5		6	5	53.59	.928	49.66
Means		6				2 01 49.517
Oct. 29	64 Ceti	6.7	5	2 03 02 53	+4.661	2 02 57.869
Jan. 2	65 Ceti ξ¹	5	5	2 04 35.83	+1.133	2 04 34.70
Sept. 4		5	5	38.57	3.799	34.77
5		5	5	38.61	.822	34.79
Oct. 29		5	5	39.52	4.666	34.85
Means		5				2 04 34.778
Jan. 2	67 Ceti F	6	5	2 09 01.56	+1.214	2 09 03.346
Sept. 4	22 Arietis θ¹	6	5	2 09 21.40	+3.890	2 09 17.51
5		6	5	21.50	.915	17.59
Oct. 29		6	5	22.17	4.828	17.34
Means		6				2 09 17.480
Jan. 2	69 Ceti	6	5	2 13 49.34	+1.211	2 13 48.13
Oct. 29		6	5	52.44	4.595	47.84
Means		6				2 13 47.987

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Sept. 4	70 Ceti	6	5	2 14 10.48	+3.693	2 14 06.79
5		6	5	10.30	.717	06.58
Means		6				2 14 06.685
Oct. 29	71 Ceti	6	5	2 17 00.94	+4.569	2 16 56.371
Sept. 4	72 Ceti ρ	5	5	2 18 20.08	+3.616	2 18 16.46
5		5	5	19.96	.639	16.32
Means		5				2 18 16.392
Jan. 2	26 Arietis	6.7	5	2 21 45.30	+1.223	2 21 44.077
Sept. 4	27 Arietis ψ	6.7	5	2 22 09.73	+3.829	2 22 05.90
5		6.7	5	09.77	.855	05.91
Means		6.7				2 22 05.908
Sept. 4	76 Ceti σ	5	5	2 24 36.97	+3.566	2 24 33.404
Jan. 2	265 A. S. C.	6.7	5	2 26 40.66	+1.263	2 26 39.40
3		6 7	5	40.64	.254	39.39
Sept. 5		6.7	5	43.16	3.731	39.43
Means		6.7				2 26 39.407
Sept. 5	81 Ceti d^2	6	5	2 29 45.06	+3.629	2 29 41.431
Jan. 2	32 Arietis ν	5.6	5	2 29 49.41	+1.276	2 29 48.13
3		5.6	5	49.51	.267	48.24
Sept. 4		6	5	52.12	3.863	48.26
Means		5.6				2 29 48.210
Sept. 5	84 Ceti	6	5	2 33 09.17	+3.633	2 33 05.537
Jan. 2	86 Ceti γ	3	5	2 35 05.47	+1.314	2 35 04.16
3		3	5	05.34	.308	04.08
30		3	5	05.16	.004	04.16
Sept. 4		3	5	07.75	3.632	04.12
5		3	5	07.73	.658	04.07
Oct. 29		3	5	08.61	4 632	03.98
Means		3				2 35 04.087
Sept. 5	299 A. S. C.	4.5	5	2 39 13.18	+4.851	2 39 08.329
Jan. 2	42 Arietis π	5	5	2 40 27.26	+1.339	2 40 25.92
3		5	5	27.15	.331	25.82

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.			Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
						h. m. s.	s.	h. m. s.
Sept. 4	42	Arietis	π	5	5	2 40 29.62	+3.769	2 40 25.86
Means				5				2 40 25.864
Sept. 5	2	Eridani	τ^2	5	5	2 43 52.85	+3.430	2 43 49.42
Oct. 3				4.5	5	54.02	4.068	49.95
Means				4.5				2 43 49.686
Jan. 3	312	A. S. C.		7	5	2 44 22.40	+1.353	2 44 21.047
Oct. 3	46	Arietis	ρ^3	6	5	2 47 32.89	+4.454	2 47 28.436
Jan 3	48	Arietis	ε	5	5	2 50 09.34	+1.397	2 50 07.94
30				5	5	08.88	.084	07.80
Sept. 5				5	5	11.76	3.823	07.94
Oct. 3				5	5	12.48	4.513	07.97
Nov. 27				5	5	13.01	5.199	07.84
Means				5				2 50 07.898
Jan. 3	92	Ceti	α	2.3	5	2 53 59.88	+1.403	2 53 58.48
Sept. 5				2.3	5	54 02.02	3.583	58.44
Oct. 3				2.3	5	02.76	4.233	58.53
Nov. 27				2.3	5	03.16	.869	58.29
Means				2 3				2 53 58.435
Sept. 5	10	Eridani	ρ^3	6	5	2 56 31.68	+3.453	2 56 28.227
Jan. 3	53	Arietis		6	5	2 58 30.70	+1.441	2 58 29.26
Oct. 3				6.7	5	33.78	4.439	29.34
Nov. 27				6.7	5	34.28	5.154	29.13
Means				6.7				2 58 29.243
Sept. 5	54	Arietis		6.7	5	2 59 24 75	+3.754	2 59 20.996
Jan. 3	57	Arietis	δ	4	5	3 02 34.42	+1.470	3 02 32.95
30				4	5	33.89	.171	32.72
Sept. 5				4	5	36.64	3.757	32.88
Oct. 3				4.5	5	37.40	4.468	32.93
Nov. 27				4	5	37.96	5.218	32.74
Means				4				3 02 32.844
Jan. 3	58	Arietis	ζ	5	5	3 05 48.15	+1.498	3 05 46.652
Oct. 3	13	Eridani	ζ	4	5	3 08 11.00	+4.039	3 08 06.961
Jan. 3	59	Arietis		6.7	5	3 10 28.43	+1.553	3 10 26.877

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 3	16 Eridani	3.4	5	3 12 30.99	+3.910	3 12 27.080
Jan. 3	64 Arietis *g*	5.6	5	3 14 57.29	+1.568	3 14 55.722
Oct. 3	1 Tauri *ο*	4.5	5	3 16 20.23	+4.249	3 16 15.981
Oct. 3	4 Tauri *s*	6	5	3 21 47.84	+4.274	3 21 43.57
Nov. 27		6	5	[illegible].57	5.086	43.48
Means		6				3 21 43.525
Jan. 3	17 Eridani	4.5	5	3 22 45.56	+1.561	3 22 43.999
Oct. 3	18 Eridani *ε*	4	5	3 25 30.46	+3.962	3 25 26.50
Nov. 27		4	5	31.10	4.717	26.38
Means		4				3 25 26.440
Jan. 3	19 Eridani *τ*²	4	5	3 26 47.50	+1.652	3 26 45.848
Nov. 27	20 Eridani F	6	5	3 29 07.62	+4.612	3 29 03.008
Jan. 3	21 Eridani	6	5	3 31 11 97	+1.598	3 31 10.372
Oct. 3	12 Tauri	6	5	3 31 38.70	+4.108	3 31 34.592
Nov. 27	Fornacis *τ*	6	5	3 32 15.22	+4.493	3 32 10.727
Nov. 27	16 Pleiadum *g*	5.6	5	3 35 27.10	+5.489	3 35 21.611
Jan. 3	17 Pleiadum *b*	4.5	5	3 35 28.50	+1.690	3 35 26.81
4		4.5	5	28.26	.683	26.58
Feb. 28		4.5	5	27.82	0.955	26.87
Oct. 3		4.5	5	31.20	4.518	26.68
4		4.5	5	31.49	.544	26.95
Means		4.5				3 35 26.778
Jan. 3	25 Tauri *η*	3	5	3 38 04.44	+1.704	3 38 02.74
4		3	5	04.24	.699	02.54
Feb. 28		3	5	03.86	0.941	02.92
Oct. 3		3	5	07.22	4.514	02.71
4		3	5	07.17	.539	02.63
Nov. 27		3	2	08.16	5.493	02.67
Means		3				3 38 02.702
Jan. 3	27 Pleiadum *f*	5	5	3 39 44.88	+1.714	3 39 43.17
4		5	5	44.84	.708	43.13
Oct. 3		5	5	47.66	4.510	43.15
4		5	5	47.75	.534	43.22
Nov. 27		5	4	48.33	5.497	42.83
Means		5				3 39 43.100

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1841.
				h. m. s.	s.	h. m. s.
Jan. 3	426 A. S. C.	6	5	3 42 45.95	+1.886	3 42 44.064
Oct. 3	31 Tauri u^2	6	5	3 43 36.11	+4.127	3 43 31.98
4		6.7	5	36.22	.151	32.07
Nov. 27		6	5	36.73	5.033	31.70
Means		6				3 43 31.917
Nov. 27	32 Eridani	5	5	3 46 23.23	+4.935	3 46 18 285
Jan. 3	33 Eridani l	5.6	5	3 46 58.59	+1.750	3 46 56.84
4		5.6	5	58.79	.741	57.05
Oct. 3		5.6	5	47 00.66	3.674	56.99
4		5.6	5	00.48	.700	56.78
Means		5.6				3 46 56.915
Jan. 3	34 Eridani γ^1	2.3	5	3 50 38.52	+1.699	3 50 36.82
4		2.3	5	38.57	.692	36.88
Oct. 3		2.3	5	40.51	3.791	36.72
4		2.3	5	40.61	.814	36.80
Means		2.3				3 50 36.805
Jan. 3	37 Tauri A^1	5	5	3 55 20.05	+1.785	3 55 18.27
4		5	5	19.94	.780	18.16
Oct. 3		5	5	23.00	4.426	18.57
4		5	5	22.83	.452	18.38
Nov. 27		5	5	23.59	5.483	18.11
Means		5				3 55 18.298
Jan. 4	Eridani A	6	5	3 59 06.28	+1.809	3 59 04.471
Oct. 4	37 Eridani	5.6	5	4 02 41.20	+3.853	4 02 37.347
Jan. 4	45 Tauri	6	5	4 02 54.52	+1.732	4 02 52.788
Oct. 4	48 Tauri	6.7	5	4 06 49.25	+4.259	4 06 44.991
Jan. 4	39 Eridani	5	5	4 06 51.80	+1.664	4 06 50.136
Feb. 28	49 Tauri μ	5	5	4 06 55.33	+1.125	4 06 54.205
Feb. 28	54 Tauri γ	3.4	5	4 10 46.22	+1.176	4 10 45.044
Jan. 4	57 Tauri h^1	6	5	4 11 02.68	+1.802	4 11 00.878
Oct. 4	59 Tauri χ	6	5	4 12 59.69	+4.507	4 12 55.183

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Jan. 4	Eridani o^2	6	5	4 14 57.52	+1.843	4 14 55.677
Feb. 28	64 Tauri δ^2	4.5	5	4 14 57.34	+1.212	4 14 56.128
Dec. 26	69 Tauri υ^1	5	5	4 16 54.08	+5.768	4 16 48.312
Oct. 4	71 Tauri	5.6	5	4 17 21.92	+4.231	4 17 17.689
Jan. 4	43 Eridani	4.5	5	4 18 06.06	+1.937	4 18 04.123
Sept. 8	44 Eridani k^1	5.6	5	4 20 22.87	+3.204	4 20 19.666
Oct. 4	80 Tauri	6	5	4 21 09.24	+4.219	4 21 05.021
Sept. 8	45 Eridani k^2	5.6	5	4 23 48.42	+3.161	4 23 45.259
Jan. 4	87 Tauri α	1	5	4 26 50.13	+1.890	4 26 48.24
Feb. 28		1	5	49.51	.284	48.23
July 26		1	5	50.38	2.082	48.30
Sept. 8		1	5	51.79	3.457	48.33
Oct. 4		1	5	52.46	4.221	48.24
Dec. 26		1	5	53.69	5.590	48.10
Means		1				4 26 48.240
Dec. 26	51 Eridani c	6	5	4 29 41.20	+5.057	4 29 36.143
Sept. 8	92 Tauri σ^2	5.6	5	4 30 14.69	+3.430	4 30 11.260
Feb. 28	53 Eridani	4	5	4 30 55.06	+1.138	4 30 53.922
Jan. 4	94 Tauri τ	5	5	4 32 44.66	+1.977	4 32 42.68
Oct. 4		5	5	46.91	4.369	42.54
5		5	5	47.19	.402	42.79
Dec. 26		5	5	48.42	5.852	42.57
Means		5				4 32 42.645
Feb. 28	54 Eridani	4	5	4 33 30.23	+1.116	4 33 29.114
Sept. 8	Eridani P	6	5	4 33 33.12	+2.643	4 33 30.477
Oct. 4	Cœli Sculp. β	5	5	4 36 29.46	+3.137	4 36 26.32
5		5	5	29.78	.167	26.61
Dec. 26		5	5	30.74	4.319	26.42
Means		5				4 36 26.450
June 3	552 A. S. C.	5	5	4 38 18.66	+0.253	4 38 18.41
July 28		4.5	5	19.86	2.827	17.03
Sept 8		4.5	5	22.68	5.671	17.01
Means		4.5				4 38 17.483

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 4	58 Eridani	6	5	4 40 31.61	+3.486	4 40 28.12
5		6	5	31.88	.512	28.37
Dec. 26		6	5	32.92	4.745	28.18
Means		6				4 40 28.223
Jan. 4	1 Orionis q	4	5	4 41 14.80	+1.895	4 41 12.905
Feb. 28	3 Orionis r	4	5	4 42 45.88	+1.318	4 42 44.562
Sept. 8	60 Eridani	6	5	4 43 04.51	+2.745	4 43 01.765
Oct. 4	7 Camelop. b	5.6	5	4 44 39.49	+5.810	4 44 33.68
5		5	5	39.71	.858	33.85
Dec. 26		5	5	42.31	8.065	34.24
Means		5				4 44 33.923
Jan. 4	61 Eridani ω	5	5	4 45 07.18	+1.863	4 45 05.317
Feb. 28	9 Orionis o^2	5	5	4 47 27.58	+1.399	4 47 26.18
Sept. 8		5	5	29.55	3.229	26.32
Means		5				4 47 26.251
Oct. 4	62 Eridani b	6	5	4 48 38.11	+3.665	4 48 34.44
5		6	5	38.35	.692	34.66
Means		6				4 48 34.551
Dec. 26	10 Camelop. d^1	4.5	5	4 49 27.70	+9.130	4 49 18.570
Jan. 4	10 Orionis s	5.6	5	4 50 20.74	+1.895	4 50 18.845
Jan. 4	102 Tauri ι	4.5	5	4 53 38.09	+2.055	4 53 36.04
Feb. 28		4.5	5	37.45	1.501	35.95
Mar. 1		4.5	5	37.12	.484	35.64
Oct. 4		5	5	40.35	4.263	36.09
5		5	5	40.33	.292	36.04
Nov. 29		4.5	5	41.49	5.606	35.88
Means		4.5				4 53 35.940
Dec. 26	65 Eridani ψ	5	5	4 53 49.10	+4.996	4 53 44.104
Mar. 1	104 Tauri m	5	5	4 58 04.96	+1.509	4 58 03.45
Dec. 26		5	5	09.42	5.845	03.57
Means		5				4 58 03.513

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Oct. 5	106 Tauri *l*	6	5	4 58 28.65	+4.241	4 58 24.409
Sept. 8	67 Eridani *β*	3	5	5 00 05.04	+2.864	5 00 02.18
Nov. 29		3	5	07.11	4.822	02.29
Means		3				5 00 02.232
Feb. 2	19 Orionis *β*	1	5	5 06 55.57	+1.743	5 06 53.83
28		1	5	55.14	.358	53.78
Mar. 1		1	5	55.14	.341	53.80
July 4		1	5	54.77	0.999	53.77
15		1	5	55.07	1.239	53.83
Sept. 8		1	5	56.66	2.761	53.90
Oct. 5		1	5	57.48	3.536	53.94
Nov. 2		1	5	58.37	4.242	54.13
29		1	5	58.76	.746	54.01
Dec. 26		1	5	58.95	.992	53.96
Means		1				5 06 53.895
Nov. 2	109 Tauri *n*	5.6	5	5 09 48.88	+5.043	5 09 43.837
Nov. 29	20 Orionis *τ*	4	3	5 09 58.13	+4.772	5 09 53.36
Dec. 26		4	5	58.46	5.031	53.43
Means		4				5 09 53.393
Oct. 5	21 Orionis	6	5	5 10 57.57	+3.746	5 10 53.824
Feb. 2	629 A. S. C.	6	5	5 11 08.44	+2.108	5 11 06.332
Feb. 28	Columbæ *o*	5	5	5 11 46.15	+1.188	5 11 44.962
Nov. 29	6 Leporis λ	4.5	5	5 12 19.80	+4.628	5 12 15.172
Nov. 2	22 Aurigæ	7	5	5 13 24.19	+5.302	5 13 18.888
Feb. 2	112 Tauri *β*	2	5	5 16 16.91	+2.127	5 16 14.78
28		2	5	16.63	1.744	14.89
Mar. 1		2	5	16.54	.718	14.82
Sept. 8		2	5	18.30	3.517	14.78
Oct. 5		2	5	19.14	4.426	14.71
Nov. 2		2	5	20.13	5.281	14.85
29		2	5	20.87	.925	14.94
Dec. 26		2	4	21.20	6.298	14.90
Means		2				5 16 14.834
Oct. 5	658 A. S. C.	6.7	5	5 19 43.94	+3.389	5 19 40.55
Nov. 2		6	5	44.63	4.117	40.51
Means		6				5 19 40.532

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 28	9 Leporis β	4	5	5 21 27.35	+1.343	5 21 26.01
Mar. 1		4	5	27.50	.323	26.18
Dec. 26		4	5	30.84	4.705	26.14
Means		4				5 21 26.110
Feb. 2	31 Orionis t	5	5	5 21 41.57	+1.843	5 21 39.727
Feb. 28	34 Orionis δ	2	5	5 23 54.74	+1.507	5 23 53.23
Mar. 1		2	5	54.60	.489	53.11
Sept. 8		2	5	55.94	2.830	53.11
Oct. 5		2	5	56.72	3.618	53.10
Nov. 2		2	5	57.62	4.361	53.26
29		2	5	58.09	.918	53.17
Means		2				5 23 53.163
Feb. 2	11 Leporis α	3.4	5	5 25 45.02	+1.789	5 25 43.23
Oct. 5		3.4	5	46.49	3.224	43.27
Nov. 2		3.4	5	46.95	.966	42.98
29		3.4	5	47.44	4.506	42.93
Dec. 26		3.4	5	47.95	.778	43.17
Means		3.4				5 25 43.116
Feb. 2	46 Orionis ε	2.3	5	5 28 10.72	+1.870	5 28 08.85
28		2.3	5	10.36	.521	08.84
Mar. 1		2.3	5	10.39	.505	08.89
Oct. 5		2.3	5	12.55	3.577	08.97
Nov. 2		2.3	5	13.31	4.325	08.99
Dec. 26		2.3	5	14.28	5.208	09.07
Means		2.3				5 28 08.935
Nov. 29	125 Tauri	6	5	5 29 59.01	+5.801	5 29 53.209
Feb. 2	Columbæ α	2	5	5 33 55.67	+1.817	5 33 53.85
28		2	5	54.92	.304	53.62
Sept. 8		2	5	55.65	.908	53.74
Nov. 2		2	5	57.27	3.585	53.69
Dec. 26		2	5	57.97	4.402	53.57
Means		2				5 33 53.694
Nov. 2	13 Leporis γ	4	5	5 37 54.03	+3.814	5 37 50.22
Dec. 26		4	5	54.95	4.676	50.27
Means		4				5 37 50.245
Mar. 1	131 Tauri O	6	5	5 38 11.67	+1.707	5 38 09.963
Oct. 5	130 Tauri N	6	5	5 38 14.12	+4.000	5 38 10.120

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Feb. 2	132 Tauri B	5	5	5 39 17.99	+2.199	5 39 15.791
Sept. 8	53 Orionis κ	3	5	5 40 15.57	+2.534	5 40 13.04
Nov. 2		3	5	16.89	4.083	12.81
Means		3				5 40 12.921
Feb. 2	136 Tauri C	5	5	5 43 22.54	+2.274	5 43 20.27
Mar. 1		4.5	3	22.10	1.905	20.20
Oct. 5		5	5	24.62	4.277	20.34
Nov. 2		5	5	25.16	5 169	19.99
Dec. 26		5	5	26.77	6.315	20.46
Means		5				5 43 20.252
Feb. 2	58 Orionis α	1	5	5 46 35.85	+2.018	5 46 33.83
Mar. 1		1	5	35.63	1.680	33.95
July 3		1	5	34.09	.169	32.92
4		1	5	35.04	.186	33.85
26		1	5	35.46	.660	33.80
Aug. 3		1	5	35.85	.860	32.99
5		1	5	35.99	.923	34.07
Sept. 8		1	5	36.65	2.880	33.77
Oct. 5		1	5	37.57	3.690	33.88
6		1	5	37.59	.723	33.87
Nov. 2		1	5	38.29	4.482	33.81
Means		1				5 46 33.885
Mar. 1	59 Orionis	6	5	5 50 10.81	+1.650	5 50 09.16
Nov. 2		6	5	13.22	4.322	08.90
Means		6				5 50 09.029
Oct. 5	60 Orionis B	6	5	5 50 42.64	+3.505	5 50 39.14
6		6	5	42.74	.533	39.21
Means		6				5 50 39.171
Mar. 1	64 Orionis χ^4	5.6	5	5 54 04.61	+1.868	5 54 02.742
Oct. 5	3 Monocerotis	5.6	5	5 54 25.02	+3.223	5 54 21.80
6		5.6	5	25.01	.252	21.76
Means		5.6				5 54 21.778
Feb. 2	1 Geminorum H	5	5	5 54 29.68	+2.260	5 54 27.420
Nov. 2	62 Orionis χ^3	5	5	5 54 33.52	+4.849	5 54 28.671
Mar. 1	17 Leporis ρ	5.6	5	5 57 54.99	+1.533	5 57 53.457

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 5	67 Orionis ν	5	5	5 58 33.64	+3.823	5 58 29.82
6		5	5	33.58	.853	29.73
Means		5				5 58 29.772
Nov. 2	18 Leporis θ	5	5	5 59 01.39	+3.882	5 58 57.508
June 4	761 A. S. C.	5	4	6 01 20.86	+0.669	6 01 20.19
5		5	3	20.16	.676	19.48
Nov. 29		5	5	29.00	11.360	17.64
Means		5				6 01 19.103
Nov. 2	Columbæ θ	5	5	6 02 07.95	+3.338	6 02 04.612
Feb. 2	68 Orionis E¹	6	5	6 02 38.52	+2.244	6 02 36.276
Oct. 5	1 Lyncis α	5	5	6 08 20.97	+6.274	6 03 14.70
6		5	5	21.37	.334	15.04
Means		5				6 03 14.866
Mar. 1	44 Aurigæ κ	4	5	6 05 17.04	+2 093	6 05 14.947
Nov. 29	7 Geminorum η	4.5	5	6 05 22.07	+5.621	6 05 16 449
Feb. 2	72 Orionis f²	6	5	6 06 17.27	+2.207	6 06 15.06
Nov. 2		6	5	19.90	4.671	15.23
Means		6				6 06 15.146
Oct. 5	5 Monocerotis α	4.5	5	6 07 09.41	+3.255	6 07 06.15
6		4.5	5	09.41	.284	06.13
Means		4.5				6 07 06.140
Mar. 1	75 Orionis l	6	5	6 08 22.72	+1.833	6 08 20.887
Nov. 2	11 Geminorum	7.8	5	6 09 43.57	+4.914	6 09 38.656
Feb. 2	13 Geminorum μ	3	5	6 13 22.86	+2.341	6 13 20.52
3		3	5	22.81	.335	20.48
Mar. 1		3	5	22.65	.031	20.62
Sept. 8		3	5	23.60	3.097	20.50
Oct. 5		3	5	24.50	.971	20.53
6		3	5	24.50	4.001	20.50
Nov. 2		3	5	25.32	.862	20.46
30		3	5	25.91	5.631	20.28
Means		3				6 13 20.486
Feb. 2	15 Geminorum	6.7	5	6 18 20.41	+2.332	6 18 18.08

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 3	15 Geminorum	6.7	5	6 18 20.15	+ 2.327	6 18 17.82
Means		6.7				6 18 17.950
Oct. 6	48 Aurigæ z	6	5	6 18 25.18	+ 4.238	6 18 20.942
Feb. 2	Canis Maj. D^1	5	5	6 22 18.71	+ 2.026	6 22 16.68
3		5	5	18.59	.014	16.58
Means		5				6 22 16.630
Oct. 6	51 (Hev.) Cephei	5	1	6 24 32.50	+36.518	6 23 55.98
Nov. 2		5.6	1	42.30	50.735	51.57
Dec. 28		5	1	25 04.09	68.663	55.43
Means		5				6 23 54.327
Feb. 2	14 Monocerotis g	6	5	6 26 11.92	+ 2.178	6 26 09.74
3		6	5	11.86	.173	09.70
Means		6				6 26 09.714
Oct. 6	24 Geminorum γ	3	5	1 28 35.06	+ 3.746	6 28 31.31
Nov. 2		3	5	35.99	4.587	31.41
Means		3				6 28 31.358
Dec. 28	7 Canis Maj. ν^2	5	5	6 29 49.84	+ 4.778	6 29 45.062
Feb. 2	8 Canis Maj. ν^3	5.6	5	6 30 56.07	+ 2.006	6 30 54.06
3		5.6	5	55.94	1.998	53.94
Means		5.6				6 30 54.003
Feb. 2	27 Geminorum ϵ	3	5	6 34 11.58	+ 2.485	6 34 09.10
3		3	5	11.28	.480	08.80
Oct. 6		3	5	12.79	3.973	08.82
Nov. 2		3	5	13.53	4.870	08.66
30		3	5	14.26	5.700	08.56
Dec. 28		3	5	15.28	6.269	09.01
Means		3				6 34 08.825
Feb. 2	9 Canis Maj. α	1	5	6 38 10.52	+ 2.021	6 38 08.50
3		1	5	10.59	.014	08.58
April 25		1	5	09.32	0.747	08.57
July 15		1	5	09.55	.764	08.79
27		1	5	09.55	.969	08.58
Nov. 2		1	5	12.07	3.617	08.45
30		1	5	12.78	4.333	08.45
Dec. 28		1	5	13.16	.799	08.36
Means		1				6 38 08.535

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 6	35 Geminorum	6	5	6 41 30.30	+3.596	6 41 26.704
Dec. 28	Arg. in pup. *x*	5	5	6 41 59.13	+3.309	6 41 55.821
Nov. 2	36 Geminorum *d*	6	5	6 42 05.80	+4.706	6 42 01.094
Oct. 6	38 Geminorum e^1	5.6	5	6 45 43.82	+3.566	6 45 40.25
Nov. 2		5.6	5	44.87	4.406	40.46
Means		5.6				6 45 40.359
Feb. 3	15 Canis Maj. π^1	5.6	5	6 46 42.71	+2.035	6 46 40.675
Nov. 2	18 Canis Maj. μ	5.6	5	6 48 53.00	+3.665	6 48 49.335
Oct. 6	20 Canis Maj. ι	5	5	6 49 05.59	+2.749	6 49 02.84
Dec. 28		4.5	4	07.70	4.827	02.87
Means		4.5				6 49 02.857
Feb. 3	21 Canis Maj. ϵ	2.3	5	6 52 24.80	+2.036	6 52 22.76
27		2.3	5	24.49	1.724	22.77
April 1		2.3	5	23.90	.059	22.84
25		2.3	5	23.48	0.581	22.90
Oct. 6		2.3	5	25.18	2.370	22.81
Nov. 2		2.3	5	25.93	3.266	22.66
Dec. 28		2.3	5	27.26	4.531	22.73
Means		2.3				6 52 22.784
Nov. 2	43 Geminorum ζ	4	5	6 54 45.10	+4.602	6 54 40.50
Dec. 28		4	5	46.75	6.047	40.70
Means		4				6 54 40.600
Feb. 3	24 Canis Maj. o^2	4	5	6 56 25.36	+2.050	6 56 23.310
Oct. 6	23 Canis Maj. γ	5.6	5	6 56 36.63	+2.775	6 56 33.855
Dec. 28	45 Geminorum o	6	5	6 59 20.74	+5.840	6 59 14.900
Feb. 3	46 Geminorum τ	5	5	7 01 03.63	+2.715	7 01 00.91
27		5	5	03.46	.506	00.95
Means		5				7 01 00.934
Oct. 6	25 Canis Maj. δ	3.4	5	7 01 58.01	+2.439	7 01 55.571
Feb. 27	22 Monocerotis *m*	4.5	5	7 03 46.72	+2.015	7 03 44.71
Dec. 28		4.5	5	49.95	5.279	44.67
Means		4.5				7 03 44.688

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1840.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1840.
				h. m. s.	*s.*	*h. m. s.*
Mar. 3	51 Geminorum	5	5	7 04 16.70	+2.192	7 04 14.508
Feb. 3	53 Geminorum z	6	5	7 06 03.21	+2.673	7 06 00.537
Feb. 3		3.4	5	7 10 39.99	+2.553	7 10 37.44
27		3.4	5	39.76	.380	37.38
Mar. 3		3.4	5	39.88	.329	37.55
April 1	55 Geminorum δ	3.4	5	39.56	1.864	37.70
Oct. 6		3.4	5	41.12	3.670	37.45
Dec. 1		3.4	5	43.32	5.466	37.85
28		3.4	5	43.60	6.093	37.51
Means		3.4				7 10 37.534
Feb. 27	57 Geminorum A	6	5	7 13 49.13	+2.459	7 13 46.671
Dec. 1	59 Geminorum	6.7	5	7 14 45.42	+5.697	7 14 39.723
Feb. 3	60 Geminorum ι	4	5	7 15 53.44	+2.705	7 15 50.735
Feb. 27		3	5	7 18 33.74	+2.190	7 18 31.55
Mar. 3	3 Canis Min. β	3	5	33.75	.142	31.61
Dec. 1		3	5	36.88	4.948	31.93
28		3	5	37.02	5.543	31.48
Means		3				7 18 31.643
Dec. 1	924 A. S. C.	6	5	7 21 44.66	+3.953	7 21 40.707
Mar. 3	7 Canis Min. δ^1	6	5	7 23 52.28	+2.082	7 23 50.198
Feb. 3	68 Geminorum k	5	5	7 24 34.25	+2.476	7 24 31.77
27		5.6	5	34.02	.335	31.68
Means		5				7 24 31.729
Mar. 3	69 Geminorum υ	5	5	7 26 09.61	+2.518	7 26 07.09
Dec. 1		5	5	12.88	5.612	07.27
Means		5				7 26 07.180
Feb. 3		1.2	5	7 31 00.83	+2.317	7 30 58.51
4		1.2	5	00.83	.316	58.51
27		1.2	5	00.74	.280	58.46
Mar. 3		1.2	5	00.58	.135	58.45
April 1		1.2	5	00.30	1.716	58.58
24		1.2	5	00.23	.361	58.87
27		1.2	5	30 59.96	.321	58.64
Nov. 4		1.2	5	31 02.58	3.978	58.60
30	10 Canis Min. α	1.2	5	03.27	4.724	58.55

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1 1841.
				h. m. s.	s.	h. m. s.
Dec. 1	10 Canis Min. cont'd. α	1.2	5	7 31 03.29	+4.752	7 30 58.54
28		1.2	5	03.88	5.363	58.52
Means		1.2			•	7 30 58.566
Feb. 3	78 Geminorum β	2	5	7 35 37.42	+2.755	7 35 34.67
4		2	5	37.51	.755	34.76
27		2	5	37.39	.622	34.77
Mar. 3		2	5	37.37	.575	34.80
21		2	5	37.14	.304	34.84
April 1		2	5	36.94	.112	34.83
24		2	5	36.49	1.704	34.79
25		2	5	36.62	.697	34.92
27		2	5	36.29	.668	34.62
Nov. 4		2	5	39.44	4.653	34.79
30		2	5	40.49	5.529	34.96
Dec. 1		2	5	40.17	.559	34.61
28		2	5	41.15	6.272	34.88
Means		2				7 35 34.788
Feb. 4	82 Geminorum B	7	5	7 39 05.55	+2.661	7 39 02.89
Dec. 1		7	5	08.10	5.388	02.71
Means		7				7 39 02.800
Mar. 21	Arg. in pup. c	4	5	7 39 36.99	+1.435	7 39 35.56
Nov. 4		4	5	38.47	2.795	35.68
Means		4				7 39 35.665
Mar. 3	Arg. in pup. e	5.6	5	7 41 30.62	+1.885	7 41 28.735
Feb. 4	7 Argus ξ	4.5	5	7 42 38.81	+2.132	7 42 36.68
Dec. 1		4	5	40.53	3.985	36.55
Means		4				7 42 36.611
Mar. 21	83 Geminorum φ	6	5	7 43 47.98	+2.349	7 43 45.63
Nov. 4		5	5	50.13	4.605	45.53
Means		5.6				7 43 45.578
Mar. 3	85 Geminorum l	6	5	7 46 25.37	+2.466	7 46 22.90
Dec. 1		6.7	5	28.15	5.225	22.93
Means		6				7 46 22.914
Feb. 4	968 A. S. C.	6.7	5	7 46 55.47	+2.414	7 46 53.056
Nov. 4	Arg. in pup. b	5	5	7 47 03.96	+2.725	7 47 01.235

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Mar. 21	1 Cancri	6.7	5	7 47 59.88	+2.162	7 47 57.718
Feb. 4	11 Argus	5.6	5	7 50 03.89	+2.148	7 50 01.74
Dec. 1		5.6	5	05.76	4.006	01.75
Means		5.6	·			7 50 01.748
Nov. 4	2 Cancri ω^1	6	5	7 51 22.73	+4.505	7 51 18.225
Mar. 3	3 Cancri	6	5	7 51 42.93	+2.439	7 51 40.49
21		6	5	42.58	.209	40.37
Means		6				7 51 40.431
Dec. 1	6 Cancri	6	5	7 53 50.12	+5.506	7 53 44.614
Mar. 21	Cancri	6	5	7 55 35.86	+2.262	7 55 33.598
Feb. 4	8 Cancri	6	5	7 56 15.39	+2.499	7 56 12.891
June 7	55 Camelop.	5	5	7 56 56.50	+1.735	7 56 54.76
Dec. 1		5.6	3	57 05.78	10.145	55.64
Means	•	5				7 56 55.200
Jan. 8	15 Argus	3.4	5	8 00 48.77	+1.984	8 00 46.79
Feb. 4		3.4	5	48.81	2.158	46.65
Mar. 3		3.4	5	48.51	1.971	46.54
21		3.4	5	48.26	.701	46.56
April 25		3.4	5	47.47	.073	46.40
Nov. 4		3.4	5	49.70	3.096	46.60
Dec. 1		3.4	5	50.57	.932	46.64
Means		3.4				8 00 46.597
Jan. 8	1004 A. S. C.	7	5	8 05 07.13	+2.322	8 05 04 81
Feb. 4		7	5	07.44	.597	04.84
Means		7				8 05 04.825
Mar. 21	20 Argus	5	5	8 06 03.42	+1.821	8 06 01.60
Dec. 1		6	5	05.79	4.117	01.67
Means		5.6				8 06 01.636
Jan. 8	17 Cancri β	4	5	8 07 55.55	+2.188	8 07 53.362
Feb. 4	21 Argus	6.7	5	8 10 08.10	+2.199	8 10 05.90
Dec. 1		6.7	5	09.92	4.049	05.87
Means		6.7				8 10 05.886

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Jan. 8	19 Cancri λ	6	5	8 11 06.89	+2.443	8 11 04.45
Mar. 3		6	5	07.16	.662	04.50
21		6.7	5	06.90	.444	04.46
Means		6				8 11 04.470
Feb. 4	20 Cancri d^1	6.7	5	8 14 18.02	+2.624	8 14 15.40
Dec. 1		6	5	20.18	5.019	15.16
Means		6				8 14 15.278
Jan. 8	21 Cancri *f*	7	5	8 15 15.46	+2.196	8 15 13.264
Mar. 3	22 Argus	6	5	8 15 20.54	+2.114	8 15 18.43
21		6	5	20.32	1.897	18.42
Means		6				8 15 18.424
Nov. 4	23 Cancri ϕ^2	6.7	5	8 17 13.88	+4.377	8 17 09.503
Dec. 1	24 Cancri υ	7.8	5	8 17 17.24	+5.228	8 17 12.012
Mar. 21	30 Monocerotis *q*	5	4	8 17 44.83	+2.017	8 17 42.813
Feb. 4	1029 A. S. C.	6	5	8 18 14.26	+2.176	8 18 12.084
Mar. 21	2 Hydræ	6	3	8 18 32.47	+1.873	8 18 30.597
Jan. 8	28 Cancri υ^2	6.7	5	8 19 13.20	+2.434	8 19 10.766
Mar. 3	31 Cancri θ	5.6	5	8 22 33.72	+2.576	8 22 31.14
21		5.6	5	33.92	.381	31.54
Dec. 1		5.6	5	36.46	4.963	31.50
Means		5.6				8 22 31.393
Jan. 8	33 Cancri η	6	5	8 23 32.80	+2.349	8 23 30.451
Dec. 1	4 Ursæ Maj. π^2	5	5	8 26 22.80	+8.568	8 26 14.232
Jan. 8	1044 A. S. C	7	5	8 27 25.79	+2.124	8 27 23.67
Mar. 21		6	5	25.86	.207	23.65
Nov. 4		6.7	5	27.12	3.730	23.39
Means		6.7				8 27 23.570
Feb. 4	4 Hydræ δ	4	5	8 29 16.66	+2.425	8 29 14.24
April 27		4.5	5	15.95	1.680	14.27
Means		4				8 29 14.252

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Mar. 21	39 Cancri	6	5	8 30 59.82	+2.461	8 30 57.36
Dec. 1		6	5	31 02.03	4.977	57.05
Means		6				8 30 57.206
Jan. 8	Pixid. Naut. η	6	5	8 31 06.94	+1.918	8 31 05.02
Nov. 4		6	5	07.84	2.889	04.95
Means		6				8 31 04.986
Mar. 21	9 Hydræ	5	5	8 34 22.81	+1.953	8 34 20.857
Jan. 8	47 Cancri δ	4.5	5	8 35 40.78	+2.282	8 35 38.50
Feb. 4		4.5	5	41.30	.641	38.66
5		4.5	5	41.20	.647	38.55
April 1		4.5	5	40.92	.295	38.63
Nov. 4		4.5	5	42.45	3.978	38.47
5		4.5	5	42.62	4.014	38.61
Dec. 1		4.5	5	43.30	.886	38.41
Means		4.5				8 35 38.547
Jan. 8	11 Hydræ ε	4	5	8 38 23.27	+2.099	8 38 21.17
Feb. 4		4	5	23.64	.440	21.20
5		4	5	23.46	.446	21.01
Mar. 21		4	5	23.50	.254	21.25
April 1		4	5	23.25	.114	21.14
27		4	5	22.98	1.741	21.24
28		4	5	22.87	.728	21.14
Nov. 4		4	5	24.79	3.662	21.13
5		4	5	24.92	.693	21.23
Dec. 1		4	5	25.46	4.529	20.93
Means		4				8 38 21.144
Feb. 4	54 Cancri	6.7	5	8 42 12.43	+2.586	8 42 09.84
5		6.7	5	12 32	.596	09.72
Mar. 21		6.7	5	12.18	.421	09.76
Nov. 4		6.7	5	13.57	3.861	09.71
5		6.7	5	13.77	.894	09.88
Means		6.7				8 42 09.782
Jan. 8	55 Cancri ρ^2	6	5	8 43 09.30	+2.490	8 43 06.81
April 1		6	5	09.62	.553	07.07
Means		6				8 43 06.938
Feb. 4	58 Cancri ρ^4	6	5	8 46 10.57	+2.886	8 46 07.68
5		6	5	10.41	.893	07.52
Mar. 21		6	5	10.30	.714	07.59
Nov. 4		6	5	11.74	4.187	07.55
5		6	5	11.78	.222	07.56
Means		6				8 46 07.580

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires ob-served.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
April 28	16 Hydræ ζ	4	5	8 47 00.98	+1.772	8 46 59.156
Jan. 8	60 Cancri α^1	6	5	8 47 16.45	+2.155	8 47 14.30
April 1		6	5	16.81	.238	14.57
Means		6				8 47 14.433
Feb. 4	65 Cancri α^2	5	5	8 49 49.83	+2.529	8 49 47.30
5		5	5	49.63	.536	47.09
Mar. 21		5	5	49.55	.392	47.16
Nov. 4		5	5	50.89	3.723	47.17
5		5	5	50.90	.756	47.14
Means		5				8 49 47.172
April 1	1098 A. S. C.	7	5	8 50 14.13	+2.369	8 50 11.761
Jan. 8	69 Cancri ν	6	5	8 53 28.34	+2.370	8 53 25.97
Feb. 5		6	5	28.52	.802	25.72
Mar. 21		6	5	28.70	.656	26.04
April 1		6	5	28.86	.516	26.34
Nov. 5		6	5	30.48	4.061	26.42
Dec. 30		6	5	32.10	5.883	26.22
Means		6				8 53 26.118
Jan. 8	18 Hydræ ω	6	5	8 57 38.03	+2.037	8 57 35.99
April 1		6	5	38.21	.185	36.03
Nov. 5		6	5	39.60	3.546	36.05
Dec. 30		6	5	41.23	5.219	36 01
Means		6				8 57 36.020
Feb. 5	76 Cancri κ	5.6	5	8 59 10.25	+2.518	8 59 07.732
April 1	77 Cancri ξ	5.6	5	9 00 15.21	+2.496	9 00 12.714
Nov. 5	1112 A. S. C.	5.6	5	9 01 07.26	+2.793	9 01 04.467
Feb. 5	Pixid. Naut. ϵ	6	5	9 03 14.63	+2.187	9 03 12.443
April 1	1117 A. S. C.	7	5	9 04 34.49	+2.502	9 04 31.988
Dec. 30	21 Hydræ K^1	6	5	9 04 39.95	+4.892	9 04 35.058
Nov. 5	18 Ursæ Maj. e	5	5	9 04 47.36	+5.173	9 04 42.187
Jan. 8	82 Cancri π^2	6	5	9 06 28.92	+2.152	9 06 26.768

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Feb. 5	23 Hydræ K²	6	5	9 08 50.26	+2.300	9 08 47.96
April 1		6	5	49.96	.081	47.88
Nov. 5		6	5	51.30	3.228	48.07
Dec. 30		6	5	52.88	4.896	47.98
Means		6				9 08 47.972
Jan. 8	83 Cancri *q*	7	5	9 10 08.14	+2.187	9 10 05.95
Dec. 3		6	5	11.06	4.712	06.35
Means		6.7				9 10 06.150
Nov. 5	26 Hydræ M²	5.6	5	9 12 10.15	+3.084	9 12 07.066
Feb. 5	27 Hydræ	5.6	5	9 12 45.58	+2.272	9 12 43.308
April 1	1135 A. S. C.	5	5	9 14 05.66	+12.202	9 13 53.458
Jan. 8	Pixid Naut. θ	5	5	9 14 29.32	+1.787	9 14 27.53
Dec. 3		5	5	31.14	3.676	27.46
Means		5				9 14 27.498
Nov. 5	1 Leonis κ	5	5	9 15 27.20	+3.933	9 15 23.267
Feb. 5	Pixid. Naut. λ	5.6	5	9 16 21.77	+2.182	9 16 19.588
Jan. 8	30 Hydræ α	2	5	9 19 48.24	+1.938	9 19 46.30
Feb. 5		2	5	48.84	2.389	46.45
April 1		2	5	48.37	.203	46.17
28		2	5	48.22	1.841	46.38
Dec. 3		2	5	50.63	4.087	46.54
30		2	5	51.28	.872	46.41
Means		2				9 19 46.375
Dec. 3	4 Leonis λ	5	5	9 22 43.33	+4.774	9 22 38.56
30		4.5	5	44.00	5.649	38.35
Means		4.5				9 22 38.453
Jan. 8	5 Leonis ξ	5.6	5	9 23 24.16	+2.044	9 23 22.12
April 28		5	5	24 25	.052	22.20
Means		5				9 23 22.157
Feb. 5	6 Leonis *h*	6	5	9 23 28.46	+2.496	9 23 25.964
April 1	32 Hydræ τ²	6	5	9 23 54.51	+2.215	9 23 52.295
April 1	8 Leonis	6.7	5	9 28 18.24	+2.512	9 28 15.73
14		6.7	5	18.21	.350	15.86
Means		6.7				9 28 15.794

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Dec. 30	35 Hydræ ι	6	5	9 31 48.99	+4.932	9 31 44.058
Feb. 5	14 Leonis ο	4	5	9 32 42.22	+2.491	9 32 39.73
6		4	5	42.10	.503	39.60
April 1		4	3	41.88	.414	39.47
2		4	5	41.92	.404	39.52
14		4	5	41.84	.261	39.58
28		4	5	41.77	.081	39.69
Nov. 5		4	5	43.12	3.433	39.69
Dec. 3		4	5	43.82	4.359	39.46
Means		4				9 32 39.593
Feb. 5	17 Leonis ε	3	5	9 36 51.97	+2.766	9 36 49.20
6		3	5	51.72	.778	48.94
April 1		3	5	51.71	.701	49.01
2		3	5	51.67	.696	48.97
14		3	5	51.37	.535	48.84
28		3	5	51.44	.335	49.11
Nov. 5		3	5	52.66	3.713	48.95
Dec. 3		3	5	53.59	4.684	48.91
Means		3				9 36 48.991
April 28	29 Ursæ Maj. υ	4.5	3	9 39 40.78	+3.579	9 39 37.20
Nov. 5		4.5	5	41.50	4.889	36.61
Means		4.5				9 39 36.906
Feb. 5	20 Leonis	7	5	9 40 58.56	+2.699	9 40 55.86
6		7	5	58.38	.711	55.67
Dec. 3		7	5	41 00.08	4.578	55.50
Means		7				9 40 55.677
April 2	4 Sextantis s	6	5	9 42 15.80	+2.358	9 42 13.44
14		6.7	5	15.67	.224	13.45
Means		6				9 42 13.442
April 28	24 Leonis μ	3	5	9 43 44.77	+2.416	9 43 42.35
Nov. 5		3	5	46.31	3.692	42.62
Means		3				9 43 42.486
Feb. 5	8 Sextantis d	6.7	5	9 44 40.38	+2.263	9 44 38.12
6		6.7	5	40.50	.275	38.23
Dec. 3		6	5	42.07	3.914	38.16
Means		6.7				9 44 38.170

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec.. &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
April 2	9 Sextantis	7	5	9 45 50.24	+2.391	9 45 47.85
14		7	5	50.18	.250	47.93
Means		7				9 45 47.889
Dec. 3	10 Sextantis	6.7	5	9 48 04.23	+4.238	9 47 59.992
Feb. 5	27 Leonis ν	5.6	5	9 49 42.43	+2.515	9 49 39.92
6		5.6	5	42.53	.527	40.00
April 1		5.6	5	42.29	.525	39.77
2		5.6	5	42.36	.515	39.85
14		5.6	5	42.30	.383	39.92
Dec. 30		5.6	5	45.04	5.164	39.88
31		6	5	45.12	.194	39.93
Means		5.6				9 49 39.896
Nov. 5	29 Leonis π	4.5	5	9 51 51.87	+3.275	9 51 48.59
Dec. 3		4.5	5	52.65	4.193	48.46
Means		4.5				9 51 48.526
April 1	1198 A. S. C.	6.7	5	9 53 59.19	+2.726	9 53 56.46
2		6.7	5	59.35	.716	56.63
14		6.7	5	59.07	.573	56.50
Dec. 30		6.7	5	54 01.93	5.400	56.53
31		6.7	5	01.91	.429	56.48
Means		6.7				9 53 56.520
Feb. 6	1199 A. S. C.	6	5	9 54 53.18	+2.224	9 54 50.91
Dec. 3		7.8	5	54.37	3.766	50.60
Means		7				9 54 50.755
April 1	1202 A. S. C.	7	5	9 57 05.48	+2.611	9 57 02.87
2		7	5	05.49	.601	02.89
14		7	5	05.41	.474	02.94
15		7	5	05.47	.462	03.01
Dec. 31		7	5	08.09	5.232	02.86
Means		7				9 57 02.914
Feb. 5		1	5	9 59 56.43	+2.490	9 59 53.94
6		1	5	56.55	.511	54.04
Mar. 6		1	5	56.63	.683	53.95
April 1		1	5	56.40	.556	53.84
2		1	5	56.54	.542	54.00
14		1	5	56.41	.422	53.99
15		1	5	56.45	.412	54.04
19		1	5	56.23	.363	53.87
Dec. 3	32 Leonis α	1	4	58.20	4.219	53.98

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1 1841.
				h. m. s.	s.	h. m. s.
Dec. 30	32 Leonis α	1	5	9 59 59.06	+5.091	9 59 53.97
31	cont'd.	1	5	58.90	.119	53.78
Means		1				9 59 53.945
April 2		7	5	10 03 07.38	+2.897	10 03 04.48
14	34 Leonis	7	5	07.20	.794	04.41
15		6	5	07.34	.783	04.56
Means		7				10 03 04.483
Feb. 6		7	5	10 03 23.63	+2.259	10 03 21.37
Dec. 3	1215 A. S. C.	6	5	25.01	3.833	21.18
31			5	26.06	4.709	21.35
Means		6.7				10 03 21.300
April 19	19 Sextantis	7	5	10 04 34.12	+2.277	10 04 31.843
April 2		7	5	10 06 15.25	+2.298	10 06 12.95
14	21 Sextantis	7	5	15.19	.182	13.01
15		7	5	15.39	.171	13.22
Means		7				10 06 13.060
April 19		7	5	10 07 38.59	+2.497	10 07 36.09
Dec. 3	1220 A. S. C.	6	5	40.22	4.285	35.94
31		7	5	41.11	5.216	35.89
Means		7				10 07 35.973
Feb. 6	36 Leonis ζ	4.5	5	10 07 53.09	+2.721	10 07 50.369
April 2		6	5	10 11 07.19	+2.724	10 11 04.47
14	40 Leonis	6	5	06.92	.606	04.31
15		6	5	07.26	.591	04.67
Means		6				10 11 04.483
Feb. 6		2	5	10 11 14.74	+2.634	10 11 12.11
Mar. 6		2	5	14.78	.853	11.93
April 19	41 Leonis γ	2	5	14.53	.554	11.98
Dec. 3		2	5	16.26	4.300	11.96
31		2	5	17.19	5.245	11.95
Means		2				10 11 11.986
April 2		6	5	10 14 43.60	+2.512	10 14 41.09
14		6.7	5	43.42	.403	41.02
15	43 Leonis z	6.7	5	43.68	.393	41.29
Dec. 3		6	5	45.02	4.016	41.00
31		6.7	5	45.97	.916	41.05
Means		6.7				10 14 41.090

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
April 19	Arg. in vel. r	4.5	5	10 15 33.00	+1.861	10 15 31.139
Dec. 3	42 Hydræ μ	4	3	10 18 27.68	+3.597	10 18 24.083
April 2	27 Sextantis	6.7	5	10 18 47.28	+2.385	10 18 44.90
14		6.7	5	47.23	.280	44.95
15		6.7	5	47.31	.270	45.04
Means		6.7				10 18 44.963
April 19	Antl. Pneum. α	4.5	5	10 19 55.20	+1.978	10 19 53.22
Dec. 31		4.5	5	57.42	4.291	53.13
Means		4.5				10 19 53.175
Dec. 3	28 Sextantis k	6	5	10 21 27.76	+3.815	10 21 23.945
April 2	31 Sextantis u	7	5	10 22 20.60	+2.477	10 22 18.12
14		7	5	20.43	.376	18.05
15		7	5	20.55	.366	18.18
Means		7				10 22 18.117
April 19	32 Sextantis x	7	5	10 24 05.19	+2.368	10 23 02.72
21		7	5	05.03	.347	02.68
Dec. 31		8	5	07.64	4.827	02.81
Means		7				10 23 02.737
Dec. 3	47 Leonis ρ	4	5	10 24 29.99	+3.998	10 24 25.992
April 14	48 Leonis	6	5	10 26 32.62	+2.458	10 26 30.16
15		6	5	32.66	.449	30.21
Means		6				10 26 30.186
April 19	1 Hyd. & Crat.	6	5	10 28 33.29	+2.155	10 28 31.14
21		6	5	33.08	.134	30.95
Dec. 31		6	5	35.81	4.474	31.34
Means		6				10 28 31.143
April 2	2 Hyd. & Crat. ϕ^3	5	5	10 30 52.78	+2.312	10 30 50.47
14		5	5	52.62	.212	50.41
15		5	5	52.64	.202	50.44
Means		5				10 30 50.440
April 19	1266 A. S. C.	5	3	10 31 40.64	+5.620	10 31 35.02
21		5	5	39.49	.532	33.96
Means		5				10 31 34.489

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1841.
				h. m. s.	s.	h. m. s.
Dec. 31	34 Sextantis	6	5	10 34 29.63	+4.751	10 34 24.879
April 19	41 Leonis Min. m	5.6	5	10 34 48.27	+2.717	10 34 45.55
21		5.6	5	48.24	.695	45.54
Means		5.6				10 34 45.549
April 2	35 Sextantis	6	5	10 35 08.20	+2.552	10 35 05.65
14		6.7	5	07.92	.460	05.46
15		6.7	5	08.04	.454	05.59
Means		6.7				10 35 05.567
April 19	37 Sextantis o^1	6.7	5	10 37 51.28	+2.451	10 37 48.83
21		6.7	5	51.01	.430	48.58
Means		6.7				10 37 48.704
Dec. 31	52 Leonis k	6	5	10 38 04.62	+4.921	10 37 59.699
April 2	3 Hyd. & Crat. b^1	6	5	10 39 07.49	+2.341	10 39 05.15
14		6	5	07.26	.249	05.01
15		6	5	07.14	.240	04.90
Means		6				10 39 05.020
April 19	4 Hyd. & Crat. ν	4	5	10 41 49.20	+2.226	10 41 46.97
21		3.4	5	49.19	.206	46.98
Dec. 31		4	5	51.51	4.431	47.08
Means		4				10 41 47.010
April 2	41 Sextantis r	6	5	10 42 22.11	+2.421	10 42 19.69
14		6	5	21.97	.336	19.63
15		6	5	22.05	.329	19.72
Means		6				10 42 19.680
April 19	6 Hyd. & Crat. b^3	5.6	5	10 45 45.49	+2.215	10 45 43.28
May 1		5.6	5	45.23	.091	43.14
Dec. 31		5.6	5	47.51	4.370	43.14
Means		5.6				10 45 43.187
April 2	54 Leonis	5.6	5	10 47 02.74	+2.944	10 46 59.80
14		5.6	5	02.60	.847	59.75
15		5.6	5	02.70	.838	59.86
Means		5.6				10 46 59.803

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 7	55 Leonis *u*	6	5	10 47 33.80	+2.270	10 47 31.530
April 19	57 Leonis	7	5	10 48 03.62	+2.418	10 48 01.20
21		7	5	03.92	.401	01.52
May 1		7	5	03.61	.394	01.22
Means		7				10 48 01.313
Jan. 11	1299 A. S. C.	5	5	10 49 20.95	+1.444	10 49 19.51
April 2		5	5	21.88	2.306	19.57
14		5	5	21.51	.194	19.32
15		5	5	21.73	.184	19.55
Dec. 31		5	5	23.44	4.161	19.28
Means		5				10 49 19.446
Jan. 11	58 Leonis *d*	5.6	5	10 52 22.61	+1.665	10 52 20.95
Feb. 7		5	5	23.08	2.290	20.79
April 2		5	5	23.66	.586	21.07
14		5	5	23.41	.513	20.90
15		5	5	23.47	.505	20.97
Means		5				10 52 20.936
April 19	50 Ursæ Maj. *a*	1.2	5	10 53 56.37	+4.638	10 53 51.73
21		1.2	5	56.14	.582	51.56
25		1.2	5	56.23	.464	51.77
May 1		1.2	5	55.74	.281	51.46
Oct. 14		1.2	5	54.39	2.584	51.81
Dec. 31		1.2	5	58.29	6.774	51.52
Means		1.2				10 53 51.642
Jan. 11	63 Leonis χ	4.5	5	10 56 50.48	+1.674	10 56 48.81
April 2		4.5	5	51.63	2.630	49.00
14		4.5	5	51.37	.560	48.81
15		4.5	5	51.39	.553	48.84
Dec. 5		4	5	52.48	3.770	48.71
31		5.6	5	53.33	4.631	48.70
Means		4.5				10 56 48.812
Feb. 7	9 Hyd. & Crat. χ^1	5	5	10 57 43.05	+2.076	10 57 40.97
April 19		5	5	43.26	.236	41.02
21		6	5	43.01	.215	40.80
25		5.6	5	43.13	.175	40.96
Means		5.6				10 57 40.938
April 25	Hyd. & Crat. χ^2	6.7	3	10 58 17.73	+2.176	10 58 15.554

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
May 1	65 Leonis p^2	5.6	5	10 58 49.87	+2.378	10 58 47.49
Jan. 11	67 Leonis	6	5	11 00 18.60	+1.916	11 00 16.6
Dec. 5		6	3	20 60	4.024	16.58
Means		6				11 00 16.630
Feb. 7	10 Hyd. & Crat.	5.6	5	11 01 05.11	+2.067	11 01 03.04
April 5		5	5	05.28	.358	02.92
14		6	5	05.19	.294	02.90
15		6	5	05.35	.286	03.06
Means		5.6				11 01 02.960
April 19	66 Leonis p^3	7	5	11 01 09.19	+2.453	11 01 06.74
21		7	5	08.84	.437	06.40
25		7	5	09.10	.401	06.70
Means		7				11 01 06.613
Jan. 11	68 Leonis δ	3	5	11 05 40.56	+1.815	11 05 38.75
Feb. 7		3	5	41.23	2.512	38.72
Mar. 7		3	5	41.48	.872	38.61
April 5		3	5	41.50	.876	38.62
14		3	5	41.50	.818	38.68
15		3	5	41.66	.811	38.85
19		3	5	41.42	.778	38.61
21		3	5	41.50	.757	38.74
25		3	5	41.60	.725	38.88
May 1		3	5	41.30	.664	38.64
Dec. 5		3	5	42.58	3.816	38.76
Means		3				11 05 38.717
Mar. 7	74 Leonis φ	5	5	11 08 37.18	+2.516	11 08 34.664
Jan. 11	75 Leonis q	5.6	5	11 09 08.11	+1.567	11 09 06.543
Dec. 5	Leonis	7	5	11 10 06.84	+3.840	11 10 03.000
Feb. 7	12 Hyd. & Crat. δ	3.4	5	11 11 25.90	+2 087	11 11 23.81
April 5		3.4	5	26.14	.459	23.68
14		3.4	5	26.18	.413	23.77
15		3.4	5	26.28	.407	23.87
19		3.4	5	26.27	.380	23.89
21		3.4	5	26.15	.366	23.78
25		3.4	5	26.05	.334	23.72
Means		3.4				11 11 23.789
Jan. 11	77 Leonis σ	4	5	11 12 57.65	+1.580	11 12 56.07
Mar. 7		4	5	58.76	2.611	56.15

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Dec. 5	77 Leonis σ	4	5	11 12 59.67	+3.650	11 12 56.02
Means		4				11 12 56.080
April 19	13 Hyd. & Crat. λ	6	5	11 15 31.84	+2.376	11 15 29.46
21		6	5	31.41	.362	29.05
25		6	5	31.59	.331	29.26
Means		6				11 15 29.257
Mar. 7	14 Hyd. & Crat. ε	5	5	11 16 37.39	+2.459	11 16 34.93
Dec. 5		5	5	38.31	3.481	34.83
Means		5				11 16 34.880
Jan. 11	15 Hyd. & Crat. γ	4	5	11 16 58.20	+1.381	11 16 56.819
April 19	16 Hyd. & Crat. κ	6	5	11 19 11.82	+2.432	11 19 09.39
25		6	5	11.69	.391	09.30
Dec. 5		6	5	12.47	3.452	09.02
Means		6				11 19 09.237
Jan. 11	85 Leonis	6	5	11 21 26.29	+1.653	11 21 24.64
Feb. 7		6	5	27.09	2.363	24.73
Means		6				11 21 24.682
April 5	1 Draconis λ	3.4	5	11 21 59.92	+6.380	11 21 53.540
April 19	87 Leonis e	5	5	11 22 14.28	+2.520	11 22 11.76
25		4.5	5	14.09	.480	11.61
Dec. 5		4.5	5	14.89	3.534	11.36
Means		4.5				11 22 11.577
May 16	1353 A. S. C.	7	5	11 23 53.73	+2.287	11 23 51.443
Feb. 7	17 Hyd. & Crat.	6	5	11 24 26.33	+2.007	11 24 24.323
Jan. 11	19 Hyd. & Crat. ξ	4	5	11 25 13.04	+1.272	11 25 11.77
Mar. 7		4	5	14.21	2.408	11.80
April 5		4	5	14.00	.458	11.54
Dec. 5		4	5	14.74	3.188	11.55
Means		4				11 25 11.665
April 19	89 Leonis H	6	5	11 26 16.44	+2.594	11 26 13.85
25		6.7	5	16.40	.557	13.84
Means		6				11 26 13.845

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires ob-s-rved.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1 1841.
				h. m. s.	s.	h. m. s.
May 15	1359 A. S. C.	6	5	11 27 57.92	+2.726	11 27 55.19
16		6	5	57.61	.715	54.88
Means		6				11 27 55.046
Jan. 11	91 Leonis ν	4.5	5	11 28 50.04	+1.440	11 28 48.60
Feb. 7		4.5	5	50.58	2.135	48.45
Mar. 7		4.5	5	51.14	.536	48.60
April 5		4.5	5	51.23	.616	48.61
May 28		4.5	5	50.74	.251	48.49
29		4.5	5	51.05	.242	48.81
Dec. 5		4.5	5	52.11	3.517	48.59
Means		4.5				11 28 48.593
Jan. 11	92 Leonis	5.6	5	11 32 32.24	+1.669	11 32 30.57
Feb. 7		5.6	5	33.02	2.420	30.60
Means		5.6				11 32 30.585
Feb. 7	27 Hyd. & Crat. ζ	4	5	11 36 44.64	+1.998	11 36 42.64
Mar. 7		5	5	45.01	2.422	42.59
April 5		4	5	45.01	.523	42.49
Dec. 5		4	5	45.59	3.315	42.28
Means		4				11 36 42.500
Jan. 11	2 Virginis ξ¹	5	5	11 37 06.62	+1.482	11 37 05.14
April 19		5.6	5	07.62	2.690	04.93
25		5.6	5	07.51	.655	04.86
Means		5.6				11 37 04.977
May 15	3 Virginis ν	4.5	5	11 37 43.61	+2.485	11 37 41.13
16		4.5	5	43.42	.476	40.94
28		4.5	5	43.53	.367	41.16
29		4.5	5	43.64	.357	41.28
Means		·4.5				11 37 41.128
Jan. 11	94 Leonis δ	2.3	5	11 40 58.28	+1.521	11 40 56.76
Feb. 7		2.3	5	58.97	2.261	56.71
Mar. 7		2.3	5	59.41	.706	56.70
April 5		2.3	5	59.53	.816	56.71
19		2.3	5	59.31	.767	56.64
25		2.3	5	59.40	.731	56.67
May 15		2.3	5	59.18	.567	56.61
16		2.3	5	59.27	.560	56.71
28		2.3	5	59.22	.452	56.77
29		2.3	5	59.22	.443	56.78
Dec. 5		2.3	5	41 00.07	3.508	56.57
Means		2.3				11 40 56.685

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 7	5 Virginis β	3.4	5	11 42 26.87	+2.132	11 42 24.74
May 28		3.4	5	27.22	.384	24.84
29		3.4	5	27.40	.373	25.03
Means		3.4				11 42 24.870
Mar. 7	64 Ursæ Maj. γ	2	5	11 45 30.96	+4.150	11 45 26.81
April 5		2	5	30.74	.225	26.52
19		2	5	30.34	.070	26.27
25		2	3	29.40	3.977	25.42
May 1		2	1	30.14	.868	26.27
14		2	5	29.78	.594	26.19
15		2	5	29.93	.571	26.36
16		2	5	29.86	.549	26.31
29		2	5	30.07	.237	26.83
Dec. 5		3	5	30.17	.803	26.37
Means		2				11 45 26.335
Jan. 11	21 Hyd. & Crat.	6	5	11 47 37.00	+1.168	11 47 35.832
April 5	1383 A. S. C.	7	5	11 50 07.40	+2.703	11 50 04.70
May 15		7	5	07.39	.516	04.87
16		7	5	07.34	.508	04.83
Means		7				11 50 04.800
Jan. 11	7 Virginis b	5.6	5	11 51 49.63	+1.358	11 51 48.27
Mar. 7		5.6	5	50.87	2.562	48.31
8		5.6	5	50.79	.573	48.22
May 14		6	5	51.09	.533	48.56
Dec. 5		5.6	5	51.32	3.411	47.91
Means		5.6				11 51 48.254
May 29	8 Virginis π	5	5	11 52 46.14	+2.436	11 52 43.704
April 5	1 Comæ Ber.	6	5	11 53 38.15	+2.978	11 53 35.17
May 1		6.7	3	37.97	.862	35.11
2		6.7	5	37.90	.855	35.05
15		6.7	5	37.97	.740	35.23
16		6	5	38.00	.731	35.27
Means		6.7				11 53 35.166
Mar. 8	1390 A. S. C.	7	5	11 55 39.95	+2.588	11 55 37.36
May 14		7	5	40.30	.567	37.73
Dec. 5		7	5	40.50	3.398	37.10
Means		7				11 55 37.397

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
May 29	2 Comæ Ber.	6	5	11 56 10.67	+2.600	11 56 08.070
April 5	9 Virginis ο	4.5	5	11 57 09.27	+2.772	11 57 06.50
May 1		4.5	5	09.12	.694	06.45
2		4.5	5	09.12	.686	06 43
Means		4.5				11 57 06.459
May 15	1393 A. S. C.	7	5	11 57 53.88	+2.502	11 57 51.38
16		7	5	53.83	.496	51.33
Means		7				11 57 51.356
Mar. 8	1 Corvi α	4.5	5	12 00 15.99	+2.419	12 00 13.57
May 14		4.5	5	15.96	.422	13.54
29		4.5	5	15.99	.288	13.70
Dec. 5		4.5	5	16.46	3.169	13.29
Means		4.5				12 00 13.525
April 5	10 Virginis τ	6	5	12 01 35.13	+2.706	12 01 32.42
May 1		6	5	35.11	.644	32.47
2		6	5	35.11	.638	32.47
Means		6				12 01 32.453
May 15	2 Corvi ε	4	5	12 02 00.11	+2.431	12 01 57.68
16		4	5	01 59.95	.424	57.53
20		4	5	59.90	.391	57.51
Means		4				12 01 57.573
Dec. 5	4 Comæ Ber.	6	5	12 03 50.08	+3 412	12 03 46.668
Feb. 9	5 Comæ Ber.	6	5	12 04 06.01	+2.307	12 04 03.703
May 29	1404 A. S. C.	5	3	12 04 46.95	+6.242	12 04 40.708
April 5	12 Virginis ι	6	5	12 05 22 81	+2.801	12 05 20.01
May 1		6	5	22.71	.738	19.97
2		6	5	22.74	.732	20.01
15		6	5	22.56	.647	19.91
16		6.7	5	22.87	.639	20.23
20		6	5	22.67	.607	20.06
Means		6				12 05 20.032
Mar. 8	69 Ursæ Maj. δ	3	5	12 07 35.09	+4.325	12 07 30.77
May 14		3	5	35.96	3.868	32.09
Dec. 5		3	5	34.80	.355	31.45
Means		3				12 07 31.437

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Feb. 9	4 Corvi γ	3	5	12 07 40.10	+1.947	12 07 38.153
May 29	6 Comæ Ber.	5	5	12 07 58.48	+2.583	12 07 55.897
May 1	7 Comæ Ber. *h*	5	5	12 08 20.52	+2.935	12 08 17.59
2		5	5.	20.51	.928	17.58
15		5.6	5	20.06	.823	17.24
16		5.6	5	20.44	.814	17.63
20		5.6	5	20.36	.775	17.59
Means		5.6				12 08 17.526
Feb. 9	15 Virginis η	3.4	5	12 11 48.47	+2.027	12 11 46.44
Mar. 8		3.4	5	48.74	.506	46.23
April 5		4	5	48.90	.698	46.20
May 1		3.4	5	48.99	.663	46.33
2		3.4	5	49.05	.658	46.39
14		3.4	5	49.13	.593	46.54
Dec. 5		3.4	5	49.45	3.271	46.18
Means		3.4				12 11 46.330
May 15	5 Corvi ζ	5.6	5	12 12 22.77	+2.499	12 12 20.27
16		5.6	5	22.88	.494	20.39
20		5.6	5	22.65	.462	20.19
Means		5.6				12 12 20.283
May 29	11 Comæ Ber. *s*	5	5	12 12 43.71	+2.628	12 12 41.082
Mar. 8	6 Corvi ι	5.6	5	12 15 07.70	+2.414	12 15 05.29
May 1		5.6	5	07.73	.596	05.13
2		5.6	5	07.82	.591	05.23
14		5.6	5	07.86	.521	05.34
Means		5.6				12 15 05.247
Feb. 9	13 Comæ Ber. *f*	5.6	5	12 16 21.95	+2.338	12 16 19.61
April 5		5.6	5	22.58	3.069	19.51
May 15		5	5	22.07	2.883	19.19
16		5	5	22.71	.875	19.84
20		5	5	22.56	.835	19.73
Means		5				12 16 19.576
May 29	14 Comæ Ber. *b*	5.6	5	12 18 29.63	+2.766	12 18 26.864
Mar. 8	1432 A. S. C.	6.7	5	12 19 44.83	+2.464	12 18 42.37
May 1		6.7	5	44.99	.668	42.32
2		7	5	44.97	.607	42.36
14		7	5	45.27	.581	42.69
Means		6.7				12 18 42.435

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 9	Centauri u	4	5	12 19 58.53	+1.902	12 19 56.63
April 5		5	5	59.18	2.715	56.47
Means		4.5				12 19 56.545
May 15	1434 A. S. C.	7.8	5	12 20 14.86	+2.659	12 20 12.20
16		7	5	14.92	.653	12 27
20		7	5	14 92	.625	12.30
Means		7				12 20 12.257
May 1	19 Virginis	7	3	12 22 31.91	+2.785	12 22 29.13
2		7	5	31.74	.781	28.96
Means		7				12 22 29.042
April 5	21 Comæ Ber. g	5.6	5	12 23 07.05	+3.036	12 23 04.01
May 16		5.6	5	06.89	2.874	04.02
20		5.6	5	06.82	.837	03.98
Means		5.6				12 23 04.003
Mar. 8	1443 A. S. C.	6.7	5	12 23 31.02	+2.458	12 23 28.56
May 14		7	5	31.36	.623	28.74
Means		6.7				12 23 28.649
Feb. 9	8 Corvi η	4.5	5	12 23 54.98	+1.894	12 23 53.086
Feb. 9	9 Corvi β	2.3	5	12 26 04.70	+1.869	12 26 02.83
Mar. 8		2.3	5	05.38	2.405	02.98
April 5		2.3	5	05.42	.652	02.77
May 1		2.3	5	05.44	.654	02.79
2		2.3	5	05.49	.650	02.84
14		2.3	5	05.53	.592	02.94
15		2.3	5	05.63	.586	03.04
16		2.3	5	05.43	.580	02.85
20		2.3	5	05.27	.553	02.72
29		2.3	5	05.48	.485	03.00
Means		2.3				12 26 02.876
May 29	Hyd. & Crat. d	5.6	5	12 29 20.03	+2.508	12 29 17.522
Mar. 8	1458 A. S. C.	7	5	12 30 18.42	+2.494	12 30 15.93
April 5		6	5	18.83	.738	16.09
May 2		6.7	5	18.74	.742	16.00
3		7	5	19.02	.739	16.28
14		6.7	5	18.98	.690	16.29
Means		6.7				12 30 16.118

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Feb. 9	1459 A, S. C.	6.7	5	12 30 34.88	+1.925	12 30 32.955
May 15	26 Comæ Ber. *m*	6	5	12 31 15.26	+2.861	12 31 12.40
16		6	5	15.17	.855	12.32
20		6	5	15.35	.822	12.53
Means		6				12 31 12.417
Feb. 9	29 Virginis *γ*¹	4	5	12 33 38.36	+1.915	12 33 36.45
April 5		3.4	5	39.17	2.695	36.48
May 14		3.4	5	39.30	.657	36.64
29		3.4	5	39.32	.564	36.76
Means		3.4				12 33 36.582
May 2	31 Virgins *d*¹	6	5	12 33 56.47	+2.789	12 33 53.68
3		6	5	56.65	.786	53.86
Means		6				12 33 53.772
May 15	Hyd. & Crat. *e*	6	5	12 35 35.80	+2.654	12 35 33.15
16		6	5	35.68	.649	33.03
20		6	5	35.46	.623	32.84
Means		6				12 35 33.007
Feb. 9	33 Virginis	6	5	12 38 19.87	+1.999	12 38 17.87
Mar. 8		6	5	20.35	2.547	17.80
April 5		6	5	20.75	.812	17.94
May 14		6.7	5	21.09	.774	18.32
29		6	5	20.81	.678	18.13
Means		6				12 38 18.012
May 15	34 Virginis	6	5	12 39 16.14	+2.791	12 39 13.35
16		6	5	16.08	.787	13.29
20		6	5	16.18	.762	13.42
Means		6				12 39 13.353
Feb. 9	30 Comæ Ber.	6	5	12 41 34.58	+2.214	12 41 32.37
Mar. 8		6	5	34.96	.811	32.15
April 5		6	5	35.49	3.087	32.40
May 14		6	5	35.91	2.991	32.92
Means		6				12 41 32.460
May 2	1480 A. S. C.	7	5	12 43 09.62	+2.733	12 43 06.89
29		6.7	5	09.76	.618	07.14
Means		6.7				12 43 07.014

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1841
				h. m. s.	*s.*	*h. m. s.*
May 15	37 Virginis	6	5	12 43 34.09	+2.745	12 43 31.35
16		6	5	34.04	.741	31.30
20		6	5	34.14	.719	31.42
Means		6				12 43 31.357
Feb. 9	35 Comæ Ber. *q*	5	5	12 45 30.10	+2.094	12 45 28.006
Mar. 8	40 Virginis ψ	5.6	5	12 46 07.85	+2.398	12 46 05.45
May 2		5.6	5	08.33	.746	05.58
14		5.6	5	08.42	.714	05.71
29		5.6	5	08.38	.636	05.74
Means		5.6				12 46 05.620
April 5	77 Ursæ Maj. ε	3	5	12 47 05.55	+4.270	12 47 01.28
May 15		3	5	04.37	3.879	00.49
16		3	5	05.09	.859	01.23
20		3	5	04.71	.777	00.93
Means		3				12 47 00.982
Feb. 9	36 Comæ Ber. *r*	4.5	5	12 51 05.72	+2.015	12 51 03.71
Mar. 8		4.5	5	06.06	.604	03.46
May 2		5	5	06.48	.935	03.55
14		5.6	5	07.03	.887	04.14
Means		5				12 51 03.715
May 20	44 Virginis *k*¹	6.7	5	12 51 31.04	+2.727	12 51 28.313
April 5	37 Comæ Ber.	5	5	12 52 42.82	+3.145	12 52 39.675
Feb. 9	47 Virginis ε	3.4	5	12 54 17.66	+1.931	12 54 15.73
Mar. 8		3.4	5	18.15	2.518	15.63
May 2		3.4	5	18.82	.875	15.95
Means		3.4				12 54 15.770
April 5	48 Virginis *k*⁴	6.7	5	12 55 45.87	+2.720	12 55 43.15
6		6.7	5	45.90	.728	43.17
May 15		7	5	45.73	.766	42.96
20		7	5	45.83	.747	43.08
Means		6.7				12 55 43.090
May 31	39 Comæ Ber. *t*	5.6	5	12 58 39.01	+2.832	12 58 36.178
Mar. 8	40 Comæ Ber.	6	5	12 58 40.58	+2.653	12 58 37.93
May 2		6	5	41.17	3.014	38.16
Means		6				12 58 38.041

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
May 15	49 Virginis *g*	6	5	12 59 37.12	+2.771	12 59 34.35
20		5.6	5	37.22	.753	34.47
Means		5.6				12 59 34.408
Feb. 9	51 Virginis θ	4.5	5	13 01 45.08	+1.786	13 01 43.29
10		4.5	5	45.07	.813	43.26
Mar. 8		5	5	45.74	2.381	43.36
May 2		4.5	5	46.34	.807	43.53
3		4.5	5	46.63	.808	43.82
Means		4.5				13 01 43.452
April 5	53 Virginis	5.6	5	13 03 39.21	+2.708	13 03 36.50
6		5.6	5	39.22	.715	36.51
Means		5.6				13 03 36.503
May 15	43 Comæ Ber. *w*	5.6	5	13 04 29.70	+2.999	13 04 26.70
20		5	5	29.82	.962	26.86
Means		5				13 04 26.780
May 31	1516 A. S. C.	6	5	13 04 40.83	+2.787	13 04 38.043
Feb. 9	55 Virginis	6	5	13 05 42.75	+1.722	13 05 41.03
10		6	5	42.92	.750	41.17
May 3		6	5	44.13	2.827	41.30
14		6	5	43.91	.814	41.10
Means		6				13 05 41.150
April 5	57 Virginis	5.6	5	13 07 26.35	+2.719	13 07 23.63
6		5.6	5	26.38	.728	23.65
Means		5.6				13 07 23.641
May 31	59 Virginis *e*	6	5	13 08 55.71	+2.794	13 08 52.916
May 3	60 Virginis σ	6	5	13 09 37.93	+2.871	13 09 35.06
14		5.6	5	37.79	.856	34.93
Means		5.6				13 09 34.996
Feb. 9	2 Hydræ con. γ	4.5	5	13 10 19.17	+1.698	13 10 17.47
10		4.5	5	19.11	.727	17.38
Means		4.5				13 10 17.427

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
April 5	Centauri ι	3	5	13 11 43.71	+2.850	13 11 40.86
6		3	5	43.87	.859	41.01
May 31		3	5	43.85	.882	40.97
Means		3				13 11 40.947
May 20	62 Virginis	7	5	13 12 02.04	+2.815	13 11 59.225
May 3	64 Virginis *u*	7	5	13 14 11.50	+2.880	13 14 08.620
Feb. 9	67 Virginis α	1	5	13 16 51.21	+1.695	13 16 49 52
10		1	5	51.24	.724	49 52
April 5		1	5	52.12	2.715	49.41
6		1	5	52.28	.724	49.56
May 14		1	5	52.29	.849	49.44
15		1	5	52.26	.848	49.41
20		1	5	52.21	.837	49.37
31		1	5	52.27	.796	49.47
Means		1				13 16 49.462
May 3	70 Virginis *w*	5.6	5	13 20 42.09	+2.951	13 20 39.14
14		6	5	42.38	.937	39.44
Means		5.6				13 20 39.291
Feb. 10	Hydræ con. *u*	7.8	5	13 21 04.11	+1.682	13 21 02.428
May 3	75 Virginis	6	5	13 24 25.25	+2.884	13 24 22.37
31		6	5	25.43	.847	22.58
Means		6				13 24 22.475
Feb. 10	76 Virginis *h*	6	5	13 24 37.86	+1.691	13 24 36.17
April 6		6	5	38.92	2.728	36.19
Means		6				13 24 36.180
May 14	79 Virginis ζ	4	5	13 26 38.81	+2.889	13 26 35.921
May 31	80 Virginis l^{a}	6	5	13 27 18.25	+2.846	13 27 15.404
Feb. 10	Hydræ con. *f*	6.7	5	13 28 02.04	+1.652	13 28 00.39
April 6		6.7	5	02.94	2.788	00.15
Means		6.7				13 28 00.270
May 14	Centauri *t*	6	5	13 29 50.08	+3.006	13 29 47.074
Feb. 10	1 Bootis	6	5	13 33 06.62	+1.814	13 33 04.81
April 6		6	5	07.68	2.894	04.79
May 31		6	5	07.74	.939	04.80
Means		6				13 33 04.800

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
May 14	82 Virginis *m*	5.6	5	13 33 19.61	+2.912	13 33 16.698
April 6	1 Centauri *i*	5	5	13 36 43.44	+2.863	13 36 40.577
Feb. 10	Hydræ con. *g*	6	5	13 36 47.36	+1.615	13 36 45.745
May 3	85 Virginis	6	5	13 37 04.21	+2.929	13 37 01.281
May 31	86 Virginis O	6	5	13 37 31.30	+2.910	13 37 28.390
Feb. 10	2 Centauri *g*	5	5	13 40 16.96	+1.609	13 40 15.35
April 6		5	5	18.19	2.887	15.30
Means		5				13 40 15.327
May 3	89 Virginis *x*	5.6	5	13 41 17.00	+2.953	13 41 14.05
31		5.6	5	17.75	.956	14.79
Means		5.6				13 41 14.420
Feb. 10	4 Centauri *h*	5	5	13 44 06.34	+1.588	13 44 04.75
April 6		5	5	07.68	2.859	04.82
May 4		5	5	08.19	3.098	05.09
31		5	5	07.55	.093	04.46
Means		5				13 44 04.780
Feb. 10	8 Bootis η	3	5	13 47 08.61	+1.712	13 47 06.90
April 6		3	5	09.75	2.851	06.90
May 3		3	5	09.78	3.019	06.76
20		3	5	09.90	.028	06.87
31		3	5	09.98	2.974	07.01
June 28		3	5	09.62	.760	06.86
Means		3				13 47 06.883
Feb. 10	93 Virginis τ	4.5	5	13 53 35.03	+1.586	13 53 33.444
May 31	1600 A. S. C.	6.7	5	13 55 54.04	+3.018	13 55 51.022
Feb. 10	5 Centauri θ	2	5	13 57 22.63	+1.524	13 57 21.11
April 6		2	5	24.03	2.918	21.11
July 26		2	3	23.74	.673	21.07
Means		2				13 57 21.097
April 6	11 Draconis α	3.4	3	14 00 09.62	+4.596	14 00 05.02
May 31		3.4	5	09.75	.164	05.59
Means		3.4				14 00 05.305

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 10	96 Virginis *y*	7	5	14 00 34.45	+1.520	14 00 32.930
Feb. 10		4	5	14 04 26.95	+1.501	14 04 25.45
April 6	98 Virginis κ	4	5	28.06	2.721	25.34
June 28		4	5	28.01	.908	25.10
Means		4				14 04 25.297
Feb. 10		1	5	14 08 26.25	+1.549	14 08 24.70
11		1	5	26.26	.578	24.68
April 6		1	5	27.44	2.791	24.65
May 4		1	5	27.84	.994	24.85
20	16 Bootis α	1	5	27.59	3.014	24.58
31		1	5	27.74	2.986	24.75
June 3		1	5	27.44	.972	24.47
28		1	5	27.45	.788	24.66
July 26		1	5	27.28	.452	24.83
Means		1				14 08 24.686
Feb. 10		5	5	14 10 32.56	+1.466	14 10 31.09
11		5	5	32.52	.498	31.02
April 6	100 Virginis λ	4	5	33.67	2.729	30 94
May 31		4.5	5	33.95	3.080	30.87
June 28		4	5	33.84	2.966	30.87
Means		4.5				14 10 30.958
June 28	103 Virginis v^2	6	5	14 13 50.07	+2.923	14 13 47.147
Feb. 11	2 Libræ	6	5	14 14 54.55	+1.459	14 14 53.091
May 4	1636 A. S. C.	5.6	5	14 16 19.57	+2.981	14 16 16.589
Feb. 11	8 Hydræ con.	5.6	5	14 18 54.47	+1.464	14 18 53.01
June 28		5.6	5	55.92	3.178	52.74
Means		5.6				14 18 52.874
Feb. 11	25 Bootis ρ	4	5	14 25 00.21	+1.550	14 24 58.66
May 4		4	1	01.82	3.147	58.67
Means		4				14 24 58.666
June 28	5 Ursæ Min. A	4	3	14 28 00.35	+3.962	14 27 56.388
Feb. 11	1651 A. S. C.	6.7	5	14 28 34.34	+1.409	14 28 32.931
June 28	29 Bootis π	5	5	14 33 18.24	+2.948	14 33 15.29
29		5	5	18.46	.940	15.52
Means		5				14 33 15.406

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App.AR.	Corr for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 11	30 Bootis ζ	3.4	5	14 33 34.93	+1.420	14 33 33.51
May 4		3.4	1	36.71	3.006	33.70
Means		3.4				14 33 33.607
May 4	35 Bootis ο	4.5	5	14 37 52.75	+3.020	14 37 49.730
Feb. 11	36 Bootis ε	3	5	14 38 04.03	+1.430	14 38 02.60
May 20		3	5	05.77	3.148	02.62
June 2		3	5	05.50	.130	02.37
3		3	5	05.74	.127	02.61
28		3	5	05.62	2.961	02.66
29		3	5	05.55	.941	02.61
July 15		3	5	05.27	.748	02.52
26		3	5	05.48	.589	02.89
28		3	3	05.27	.657	02.61
Means		3				14 38 02.610
June 28	8 Libræ α^1	6	5	14 41 57.30	+3.188	14 41 54.11
29		6	5	57.38	.181	54.20
Means		6				14 41 54.155
Feb. 11	9 Libræ α^2	3	5	14 42 07.06	+1.343	14 42 05.72
May 4		3	5	08.69	3.094	05.60
20		3	5	08.71	.208	05.50
June 2		3	5	08.89	.249	05.64
3		3	5	08.85	.249	05.60
28		3	5	08.80	.190	05.61
29		3	5	08.87	.184	05.69
July 26		3	5	08.43	2.943	05.49
Means		3				14 42 05.606
Feb. 11	13 Libræ ξ^1	6	5	14 45 46.83	+1.324	14 45 45.51
May 4		6	5	48.70	3.066	45.63
Means		6				14 45 45.570
June 28	1690 A. S. C.	6	5	14 48 14.72	+3.293	14 48 11.43
29		6	5	15.11	.288	11.82
Means		6				14 48 11.624
May 4	17 Libræ	7	3	14 49 40.06	+3.064	14 49 36.996
Feb. 11	18 Libræ	7	5	14 50 19.43	+1.301	14 50 18.129
May 20	7 Ursæ Min. β	3	5	14 51 20.74	+5.725	14 51 15.02
June 2		3	3	15.76	.286	10.47
3		3	5	18.57	.244	13.33

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
June 28	7 Ursæ Min. cont'd. β	3	3	14 51 18.50	+3.860	14 51 14.64
29		3	3	18.44	.794	14.65
July 15		3	5	18.65	2.641	16.01
26		3	4	15.89	1.776	14.11
28		3	5	15.16	.615	13.55
Means		3				14 51 13.973
Feb. 11	20 Libræ	3.4	5	14 54 47.99	+1.291	14 54 46.70
12		3.4	5	48.27	.324	46.95
June 28		3.4	5	50.06	3 396	46.66
29		3.4	5	50.13	.391	46.74
July 26		3.4	5	49.91	.146	46.76
Means		3.4				14 54 46.762
June 28	22 Libræ ν^2	6.7	5	14 58 00.36	+3.293	14 57 57.07
29		6.7	5	00.37	.288	57.08
Means		6.7				14 57 57.074
Feb. 11	45 Bootis c	5	5	15 00 20.50	+1.260	15 00 19.24
12		5	5	20.40	.287	19.11
Means		5				15 00 19.176
Feb. 11	24 Libræ ι^1	5.6	5	15 03 11.55	+1.242	15 03 10.31
12		5.6	5	11.55	.276	10.27
June 2		5.6	5	13.78	3.389	10.39
3		5.6	5	13.45	.391	10.06
11		5.6	5	13.60	.407	10.19
28		5.6	5	13.48	.371	10.11
29		5.6	5	13.86	.366	09.99
Means		5.6				15 03 10.189
Feb. 12	27 Libræ β	2.3	5	15 08 28.80	+1.238	15 08 27.56
June 2		2.3	5	30.91	3.283	27.63
3		2.3	5	30.65	.285	27.37
11		2.3	5	30.78	.300	27.48
26		2.3	4	30.79	.277	27.51
29		2.3	5	30.67	.264	27.41
July 11		2.3	5	30.70	.193	27.51
15		2.3	5	30.77	.162	27.61
26		2.3	5	30.48	.055	27.43
27		2.3	5	30.48	.043	27.44
Means		2.3				15 08 27.495
June 2	28 Libræ ν	6.7	5	15 11 57.03	+3.401	15 11 53.63
29		6.7	5	56.88	.396	53.48
Means		6.7				15 11 53.556

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Feb. 12	29 Libræ o^1	7	5	15 12 09.90	+1.226	15 12 08.674
June 2	1746 A. S. C.	6	5	15 15 12.74	+3.336	15 15 09.404
Feb. 12	31 Libræ ε	5.6	5	15 15 36.39	+1.201	15 15 35.19
June 29		5.6	5	38.51	3.313	35.20
Means		5.6				15 15 35.193
May 6	9 Serpentis	5.6	5	15 18 28.10	+3.000	15 18 25.100
Feb. 12	32 Libræ ζ^1	6	5	15 19 19.10	+1.192	15 19 17.91
June 2		6	5	21.40	3.408	17.99
29		6	5	21.44	.419	18.02
Means		6				15 19 17.973
July 26	12 Draconis ι	3	5	15 21 26.48	+2.374	15 21 24.106
May 6	1758 A. S. C.	6	5	15 23 32.77	+3.217	15 23 29.55
June 2		6.7	5	32.98	.471	29.51
Means		6				15 23 29.531
Feb. 12	35 Libræ ζ^4	6	5	15 23 58.03	+1.169	15 23 56.86
June 29		6	5	24 00.28	3.447	56.83
30		6	5	00.22	.445	56.78
Means		6				15 23 56.823
June 2	38 Libræ γ	4.5	5	15 26 42.03	+3.406	15 26 38.624
Feb. 12	5 Cor. Bor. α	2	5	15 27 58.41	+1.072	15 27 57.34
May 6		2	5	28 00.37	3.025	57.35
June 2		2	5	00.60	.183	57.42
3		2	5	00.77	.183	57.59
11		2	5	00.56	.180	57.38
26		2	3	00.55	.114	57.44
29		2	5	00.62	.093	57.53
30		2	5	00.61	.086	57.52
July 10		2	5	00.35	2.993	57.36
11		2	5	00.38	.981	57.40
15		2	5	00.44	.935	57.51
26		2	5	00.25	.787	57.46
Means		2				15 27 57.442
May 6	43 Libræ κ	5	5	15 32 50.90	+3.226	15 32 47.67
June 2		5	5	51.35	.502	47.85
30		5	5	51.29	.542	47.75

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
July 26	43 Libræ κ	5	5	15 32 50.94	+3.360	15 32 47.58
Means		5				15 32 47.712
Feb. 12	24 Serpentis α	2.3	5	15 36 27.37	+1.059	15 36 26.31
May 6		2.3	5	29.42	2.993	26.43
June 2		2.3	5	29.60	3.226	26.37
3		2.3	5	29.77	.229	26.54
11		2.3	5	29.68	.254	26.43
29		2.3	5	29.57	.234	26.31
30		2.3	5	29.64	.234	26.41
July 10		2.3	5	29.55	.177	26.37
11		2.3	5	29.53	.170	26.36
15		2.3	5	29.52	.139	26.38
26		2.3	5	29.31	.033	26.28
Aug. 23		2.3	5	29.06	2.752	26.31
Means		2.3				15 36 26.378
Feb. 12	1 Scorpii b	5	5	15 41 27.02	+1.102	15 41 25.92
May 6		5	5	29.15	3.340	25.81
June 2		5	5	29.53	.652	25.88
3		5	5	29.34	.660	25.68
30		5	5	29.38	.717	25.66
July 10		5	5	29.48	.672	25.81
15		5	4	29.55	.637	25.91
26		5	5	29.01	.536	25.47
Means		5				15 41 25.767
Feb. 12	2 · Scorpii A^{1}	5	5	15 44 05.79	+1.088	15 44 04.70
May 6		5	5	08.11	3.334	04.78
June 2		3.4	5	08.52	.654	04.87
3		5	5	08.30	.658	04.64
29		5	5	08.38	.724	04.66
30		5	5	08.28	.723	04.56
July 10		5	5	08.45	.681	04.77
26		5	5	07.91	.549	04.36
Means		5				15 44 04.668
June 29	5 Scorpii ρ	4	5	15 47 08.63	+3.837	15 47 04.79
30		4	5	08.79	.834	04.96
Means		4				15 47 04.874
May 6	6 Scorpii π	3.4	5	15 49 18.21	+3.351	15 49 14.86
June 2		3.4	5	18.51	.690	14.82
3		3.4	5	18.46	.696	14.76
July 26		3.4	5	18.07	.604	14.47
Means		3.4				15 49 14.728

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1 1841.
				h. m. s.	s.	h. m. s.
June 27	16 Ursæ Min. ζ	4	3	15 49 56.15	+4.427	15 49 51.72
July 10		4	5	56.15	3.384	52.77
15		4	5	55.52	+2.920	52.60
Nov. 27		4	1	44.28	—8.456	52.74
Means		4				15 49 52.457
Feb. 12	7 Scorpii δ	3	5	15 50 57.48	+1.049	15 50 56.38
June 29		3	5	51 00.22	3.707	56.51
30		3	5	00.38	.705	56.68
Means		3				15 50 56.523
May 6	3 Herculis	6	5	15 53 00.89	+2.985	15 52 57.905
Feb. 12	5 Herculis r	6	5	15 54 06.69	+0.910	15 54 05.780
June 30	44 Serpentis π	4.5	5	15 55 30.29	+3.175	15 55 27.115
May 6	8 Scorpii β^1	2	5	15 56 15.25	+3.240	15 56 12.01
June 2		2	5	15.76	.578	12.18
3		2	5	15.58	.587	11.99
27		2	3	15.80	.678	12.12
July 15		2	5	15.69	.616	12.07
Means		2				15 56 12.074
Feb. 12	10 Scorpii ω^2	4.5	5	15 58 06.48	+1.009	15 58 05.471
May 6	Scorpii m	6	5	15 58 30.34	+3.365	15 58 26.975
June 30	13 Draconis θ	3.4	5	15 58 58.14	+3.239	15 58 54.901
June 2	45 Serpentis g^1	6	5	16 00 05.45	+3.232	16 00 02.22
3		6	5	05.57	.239	02.33
Means		6				16 00 02.274
May 6	12 Scorpii c^1	6.7	5	16 02 30.66	+3.412	16 02 27.248
June 2	15 Scorpii χ	5.6	5	16 03 22.22	+3.434	16 03 18.79
3		5.6	5	22.38	.442	18.94
30		5	5	22.34	.535	18.81
Means		5.6				16 03 18.847
May 6	1 Ophiuchi δ	3	5	16 06 04.30	+3.031	16 06 01.27
June 2		3	5	04.45	.355	01.10
3		3	5	04.57	.365	01.21
27		3	5	04.49	.455	01.04
30		3	5	04.48	.454	01.03
July 9		3	5	04.56	.429	01.13

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.		Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
					h. m. s.	s.	h. m. s.
Aug. 15	1 Ophiuchi	δ	3	5	16 06 04.22	+3.085	16 06 01.14
Means			3				16 06 01.132
Aug. 24	2 Ophiuchi	ε	3	5	16 09 57.71	+2.999	16 09 54.711
May 6	20 Scorpii	σ	4	5	16 11 35.50	+3.352	16 11 32.15
June 2			4	5	35.76	.749	32.01
3			4	5	35.85	.758	32.09
27			4	5	35.93	.890	32.04
30			4	5	35.91	.890	32.02
July 9			4	5	35.87	.871	32.00
28			4	5	35.79	.740	32.05
Means			4				16 11 32.052
June 2	20 Herculis	γ	3.4	5	16 14 57.53	+3.197	16 14 54.33
3			3.4	5	57.56	.204	54.36
30			3.4	5	57.92	.247	54.67
Aug. 24			3.4	5	57.23	2.627	54.60
Means			3.4				16 14 54.490
May 6	21 Scorpii	α	1	5	16 19 43.46	+3.359	16 19 40.10
June 2			1	5	43.95	.793	40.16
3			1	5	43.87	.804	40.07
27			1	3	44.13	.953	40.18
30			1	5	44.11	.956	40.15
July 1			1	5	43.78	.956	39.82
9			1	5	44.12	.944	40.18
28			1	5	43.89	.822	40.07
Aug. 15			1	5	43.84	.600	40.24
16			1	5	43.66	.586	40.07
23			1	5	43.63	.478	40.15
24			1	5	43.71	.462	40.25
Oct. 18			1	5	42.79	2.656	40.13
Means			1				16 19 40.121
May 6	14 Draconis	η	3	3	16 21 54.15	+3.429	16 21 50.72
June 3			3	4	54.25	.637	50.61
27			3	3	54.29	.369	50.92
30			3	5	53.35	.307	50.04
July 1			3	2	53.46	.285.	50.18
9			3	4	53.98	.084	50.90
28			3	5	53.14	2.463	50.68
Aug. 15			3	3	52.59	1.731	50.86
24			3	2	52.30	+1.349	50.95
Dec. 26			3	5	50.06	—1.276	51.34
Means			3				16 21 50.720

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 18	27 Herculis β	2.3	5	16 23 25 18	+1.710	16 23 23.470
July 28	29 Herculis h	4.5	5	16 25 12.97	+3.172	16 25 09.798
June 30	23 Scorpii τ	3.4	2	16 26 03.72	+4.040	16 25 59.68
July 1		3.4	5	03.52	.040	59.48
Aug. 24		3.4	5	03.12	3.550	59.57
Means		3.4				16 25 59.577
Aug. 24	13 Ophiuchi ζ	3.4	5	16 28 27.55	+3.210	16 28 24.34
Oct. 18		3.4	5	27.04	2.449	24.59
Means		3.4				16 28 24.465
June 3	33 Herculis	7.8	5	16 29 11.70	+3.277	16 29 08.42
July 28		6.7	5	11.39	.250	08.14
Means		7				16 29 08.281
June 3	24 Scorpii m	5	5	16 32 26.60	+3.630	16 32 22.97
30		5	5	26.86	.805	23.06
July 1		5	3	26.65	.805	22.85
28		5	5	26.57	.701	22.87
Aug. 24		5	5	26.28	.375	22.91
Means		5				16 32 22.932
June 30	25 Scorpii	6.7	5	16 37 11.69	+4.019	16 37 07.671
Oct. 18	26 Scorpii ε	3	5	16 39 55.92	+2.863	16 39 53.057
June 3	47 Herculis k	6	5	16 42 39.36	+3.281	16 42 36.079
June 3	25 Ophiuchi ι	4	5	16 46 32.23	+3.253	16 46 28.98
Oct. 18		4	3	31.34	2.084	29.26
Means		4				16 46 29.116
July 28	1931 A. S. C.	6	5	16 46 54.89	+3.769	16 46 51.121
July 1	54 Herculis	6	2	16 48 26.40	+3.321	16 48 23.079
July 28	27 Ophiuchi κ	6	5	16 50 11.84	+3.305	16 50 08.54
Aug. 24		4	5	11.70	2.970	08.73
Sept. 21		4	5	11.25	.507	08.74
Means		4				16 50 08.670
July 28	58 Herculis ε	3	5	16 54 15.22	+3.024	16 54 12.20
Aug. 24		3	5	14.98	2.568	12.41
25		3	5	15.07	.549	12.52
Means		3				16 54 12.377

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
June 3	19 Draconis *h*	5	5	16 55 13.39	+ 3.646	16 55 09.744
July 28	60 Herculis	5	5	16 58 03.48	+ 3.288	16 58 00.19
Aug. 24		5	5	03.35	2.947	00.40
25		5	5	03.44	.934	00.51
Means		5				16 58 00.367
June 3	35 Ophiuchi *η*	2.3	5	17 01 19.36	+ 3.623	17 01 15.74
4		2.3	5	19.33	.638	15.69
Sept. 21		2.3	5	18.90	.080	15.82
Oct. 18		2.3	5	18.69	2.701	15.99
Means		2.3				17 01 15.810
Mar. 14	22 Ursæ Min. *ε*	4	3	17 02 26.18	— 0.622	17 02 28.80
July 28		4	3	30.46	+ 1.734	28.73
29		4	3	30.22	.594	28.63
Aug. 24		4	1	25.86	— 2.696	28 56
25		4	1	25.80	.874	28.67
Oct. 5		4	1	21.86	10.286	32.15
Nov. 29		4	1	12.50	17.032	29.53
Dec. 26		4	1	11.87	.365	29 23
Means		4				17 02 29.288
June 3	29 Scorpii	6.7	5	17 04 24.42	+ 3.908	17 04 20.51
4		6.7	5	24.25	.924	20.33
Means		6.7				17 04 20.419
Aug. 25	36 Ophiuchi A	6	5	17 05 38.60	+ 3.773	17 05 34.827
Mar. 14	64 Herculis *α*	3.4	5	17 07 25.45	+ 1.378	17 07 24.07
May 8		3.4	5	26.77	2.794	23.98
June 3		3.4	5	27.22	3.210	24.01
4		3.4	5	27.25	.221	24.03
July 1			5	27.59	.396	24.19
29		3.4	5	27.08	.291	23.79
Sept. 21		3.4	5	26.43	2.476	23.95
Means		3.4				17 07 24.003
Aug. 25	23 Draconis *ζ*	3	5	17 08 21.66	+ 1.233	17 08 20.43
Oct. 18		3	5	18.69	0.804	17.89
Means		3				17 08 19.156
Mar. 14	42 Ophiuchi *θ*	4	5	17 12 16.80	+ 1.695	17 12 15.11
May 8		3.4	5	18.36	3.331	15.03

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
June 3	42 Ophiuchi θ cont'd.	3.4	5	17 12 18.98	+3.859	17 12 15.12
4		3.4	5	18.79	.875	14.92
July 28		3.4	5	18.91	4.130	14.78
29		3.4	5	19.03	.124	14.91
Aug. 25		3.4	5	18.98	3.817	15.16
Means		3.4				17 12 15.004
July 1	43 Ophiuchi y	5	5	17 13 25.66	+4.259	17 13 21.401
June 4	1990 A. S. C.	6	5	17 15 15.32	+3.782	17 15 11.538
July 28	33 Scorpii	6	5	17 15 27.34	+4.127	17 15 23.22
29		6.7	5	27.60	.119	23.48
Means		6				17 15 23.347
May 8	44 Ophiuchi b	5	5	17 16 43.09	+3.305	17 16 39.785
Mar. 14	45 Ophiuchi d	5	5	17 17 14.25	+1.729	17 17 12.52
July 1		5	5	16.57	4.335	12.24
Aug. 25		5	5	16.61	3.997	12.61
Means		5				17 17 12.457
June 4	49 Ophiuchi σ	4.5	5	17 18 40.90	+3.317	17 18 37.583
July 28	2003 A. S. C.	6	5	17 20 00.57	+3.260	17 19 57.31
29		6	5	00.87	.250	57.62
Means		6				17 19 57.465
May 8	2004 A. S. C.	6	5	17 20 46.27	+2.881	17 20 43.389
Mar. 14	51 Ophiuchi e^2	5	5	17 21 44.92	+1.639	17 21 43.28
Aug. 25		5	5	47.14	3.856	43.28
Means		5				17 21 43.282
June 4	35 Scorpii λ	3	5	17 22 53.49	+4.318	17 22 49.172
July 28	Ophiuchi h	6	5	17 23 26 63	+3.548	17 23 23.08
29		6	5	26.88	.539	23.34
Means		6				17 23 23.211
May 8	76 Herculis λ	4.5	5	17 24 21.68	+2.668	17 24 19.01
Aug. 25		4.5	5	21.66	.789	18.87
Means		4.5				17 24 18.941
Mar. 14	55 Ophiuchi α	2	5	17 27 34.65	+1.269	17 27 33.38

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
May 8	55 Ophiuchi α	2	5	17 27 35.97	+2.736	17 27 33.23
June 4	cont'd.	2	5	36.53	3 217	33.31
July 1		2	5	36.93	.449	33.48
28		2	5	36.61	.398	33.21
29		2	5	36.80	.392	33.41
Aug. 25		2	5	36.40	.079	33.32
Sept. 21		2	5	36.01	2.617	33.39
Means		2				17 27 33.341
June 4	Scorpii κ	3	5	17 31 33.96	+4.417	17 31 29.543
Mar. 14	56 Serpentis ο	4.5	5	17 32 30.49	+1.475	17 32 29.02
July 28		4.5	5	32.53	3.909	28.62
29		4.5	5	32.88	.901	28.98
Means		4.5				17 32 28.873
May 8	27 Draconis f	5.6	5	17 32 38.74	+2.935	17 32 35.80
Aug. 25		5	5	38.12	1.170	36.95
Means		5				17 32 36.377
June 4	58 Ophiuchi D	5.6	5	17 33 58.10	+3.796	17 33 54.30
July 1		5	5	58.54	4.122	54.42
Means		5				17 33 54.351
Mar. 14	3 Sagittarii p	5	5	17 37 35.03	+1.606	17 37 33.42
May 8		5	5	36.55	3.356	33.19
June 4		5	5	37.25	.976	33.27
July 1		5	5	37.74	4.332	33.41
28		5	5	37.54	.365	33.18
29		5	5	37.76	.361	33.40
Aug. 25		5	5	37.33	.083	33.25
Means		5				17 37 33.303
Mar. 14	86 Herculis μ	4	5	17 40 15.40	+1 024	17 40 14.38
May 8		4	5	17.08	2.590	14.49
July 29		3.4	5	17.50	3.205	14.30
Aug. 16		4	5	17.25	2.979	14.27
25		4	5	17.42	.828	14.59
Sept. 21		4	5	16.47	.282	14.19
Means		4				17 40 14.370
May 8	63 Ophiuchi z	6.7	5	17 45 10.30	+3.260	17 45 07.04
July 29		6.7	5	11.27	4.300	06.97
Aug. 16		6.7	5	11.08	.157	06.92
Means		6.7				17 45 06.977

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
July 29	89 Herculis	6	5	17 49 03.88	+3.256	17 49 00.62
Aug. 16		5.6	5	03.48	.047	00.43
Means		5.6				17 49 00.528
Mar. 14	64 Ophiuchi ν	4	5	17 50 18.41	+1.354	17 50 17.06
Sept. 21		4	5	19.64	3.251	16.39
Means		4				17 50 16.722
May 8	32 Draconis ξ	3.4	5	17 50 49.51	+2.519	17 50 46.99
June 4		3.4	5	50.06	3.112	46.95
Means		3.4				17 50 46.970
Aug. 25	92 Herculis ξ	4	5	17 51 38.19	+2.847	17 51 35.343
July 29	93 Herculis E	5	5	17 53 02.41	+4.002	17 52 58.408
May 8	69 Ophiuchi τ	5.6	5	17 54 28.47	+2.898	17 54 25.572
June 4	10 Sagittarii γ^2	3	5	17 55 39.78	+4.063	17 55 35.72
5		3	5	40.06	.083	35.98
Sept. 21		4	5	39.47	3.831	35.64
Means		3.4				17 55 35.780
Nov. 29	2084 A. S. C.	5	3	17 56 26.88	−8.774	17 56 35.654
May 8	70 Ophiuchi p	4.5	5	17 57 28.08	+2.737	17 57 25.34
July 29		4.5	5	28.90	3.668	25.23
Aug. 16		4.5	5	28.77	.533	25.24
Means		4.5				17 57 25.270
May 8	72 Ophiuchi S^2	4	5	17 59 51.65	+2.649	17 59 49.001
Oct. 20	103 Herculis o	4	5	18 01 22.24	+1.764	18 01 20.476
May 8	13 Sagittarii μ^1	3.4	5	18 04 18.65	+3.113	18 04 15.54
June 4		3.4	5	19.08	.764	15.32
5		3.4	5	19.14	.784	15.36
July 29		3.4	5	19.74	4.264	15.48
Means		3.4				18 04 15.425
July 29	- Sagittarii g	5.6	5	18 08 10.51	+4.481	18 08 06.03
Aug. 16		5.6	5	10.45	.365	06.09
Means		5.6				18 08 06.057
June 5	2104 A. S. C.	7	5	18 08 12.40	+3.711	18 08 08.689

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1841.
				h. m. s.	s.	h. m. s.
Mar. 14	19 Sagittarii δ	3.4	5	18 10 50.49	+ 1.466	18 10 49.02
May 8		3.4	5	52.34	3.318	49.02
Means		3.4				18 10 49.023
July 29	2106 A. S. C.	6	5	18 11 03.78	+ 4.136	18 10 59.64
Aug. 16		6	5	03.52	.030	59.49
Means		6				18 10 59.567
June 5	105 Herculis G	5	5	18 12 41.39	+ 3.047	18 12 38.343
May 8	2114 A. S. C.	6	5	18 14 51.42	+ 3.331	18 14 48.09
Aug. 16		6	5	52.74	4.641	48.20
22		6.7	5	53.11	.474	48.64
Means		6				18 14 48.310
June 5	2117 A. S. C.	5.6	5	18 15 34.02	+ 3.049	18 15 30.971
May 8	22 Sagittarii λ	4	5	18 18 12.57	+ 3.171	18 18 09.40
June 5		4	5	13.07	.897	09.17
Aug. 16		4	5	13.77	4.364	09.41
22		4	5	14.10	.301	09.80
Sept. 23		4	5	13.27	3 803	09.47
Means		4				18 18 09.450
June 5	23 Ursæ Min. δ	3	1	18 23 45.36	+ 7.964	18 23 37.40
Aug. 22		3	1	32.01	— 5.201	37.21
Sept. 23		3	1	19.10	18.081	37.18
Oct. 6		3	1	09.55	23 851	33.40
Nov. 2		3	1	04.71	34.876	39.59
Dec. 28		3	1	22 48.46	48.153	36.61
Means		3				18 23 36.898
June 5	Clypei Sob.	6.7	5	18 28 26.81	+ 3.653	18 28 23.157
May 8	2152 A. S. C.	6	5	18 28 53.49	+ 3.084	18 28 50.406
May 8	26 Sagittarii	6	5	18 32 12.73	+ 3.080	18 32 09.65
June 5		6	5	13.35	.827	09.52
July 3		6	3	14.19	4.314	09.88
Means		6				18 32 09.683
Aug. 22	2159 A. S. C.	7	5	18 32 43.07	+ 4 043	18 32 39.027
Oct. 20	2 Aquilæ o	5	5	18 33 37.04	+ 3.018	18 33 34.022

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
May 8	27 Sagittarii φ	4.5	5	18 35 46.29	+3.147	18 35 43.143
June 5	28 Sagittarii	6	5	18 36 48.92	+3.778	18 36 45.14
6		6	5	48.81	.800	45.01
Means		6				18 36 45.076
Aug. 22	4 Aquilæ	5.6	5	18 36 52.08	+3.652	18 36 48.428
June 6	46 Draconis C	5	5	18 39 35.83	+2.876	18 39 32.954
July 3	111 Herculis M	5.6	5	18 40 03.71	+3.434	18 40 00.276
Aug. 22	29 Sagittarii r	6	5	18 40 18.21	+4.251	18 40 13.959
June 5	34 Sagittarii σ	3	5	18 45 27.89	+3.878	18 45 24.01
6		3	5	28.09	.903	24.19
Aug. 22		3	5	28 76	4.478	24.28
Sept. 23		3	5	28.10	.011	24.09
Means		3				18 45 24.285
Aug. 22	47 Draconis ο	5	5	18 48 54.19	+2.425	18 48 51.765
July 3	64 Serpentis	6	5	18 49 20.86	+3.671	18 49 17.189
Aug. 16	13 Aquilæ ε	4	5	18 52 28.01	+3.502	18 52 24.51
22		4	5	27.87	.445	24.43
Oct. 20		3.4	5	27.11	2.487	24.62
21		3.4	5	26.78	.471	24.31
Means		3.4				18 52 24.467
July 3	12 Aquilæ i	5.6	5	18 53 15.27	+3.833	18 53 11 437
June 5	48 Draconis	5	5	18 54 06.83	+2.780	18 54 04.05
6		5	5	06.09	.802	03.29
Means		5				18 54 03.669
Aug. 16	39 Sagittarii ο	4.5	5	18 55 13.57	+4.408	18 55 09.16
22		4.5	5	13.59	.365	09.22
Means		4.5				18 55 09.193
Oct. 21	40 Sagittarii τ	4	5	18 57 04.27	+3.625	18 57 00.645
June 5	17 Aquilæ ζ	3	5	18 58 09.13	+3.032	18 58 06.10
6		3	5	09.10	.054	06.05

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1841.
				h. m. s.	*s.*	*h. m. s.*
July 3	17 Aquilæ ζ cont'd.	3	5	18 58 09.82	+3.487	18 58 06.33
Aug. 16		3	5	09.80	.544	06.26
19		3	5	09.65	.520	06.13
Means		3				18 58 06.174
June 5	41 Sagittarii π	4.5	5	19 00 21.89	+3.683	19 00 18.21
6		4.5	5	21.96	.708	18.25
Aug. 19		4.5	5	22.70	4.386	18.31
22		4.5	5	22.67	.362	18.31
Sept. 18		4.5	3	22.30	.018	18.28
Oct. 20		4.5	5	21.81	3.475	18.34
21		4.5	5	21.79	.460	18.33
Means		4.5				19 00 18.290
July 3	19 Aquilæ	6	5	19 01 16.41	+3.606	19 01 12.804
Aug. 16	2223 A. S. C.	7.8	5	19 02 56.58	+4.217	19 02 52.363
June 6	20 Aquilæ B	5	5	19 04 06.42	+3.386	19 04 03.03
Aug. 19		6	5	07.08	4.022	03.06
22		6	5	07.18	.001	03.18
Sept. 18		5.6	5	06.79	3.673	03.12
19		6	5	06.87	.658	03.21
Means		5.6				19 04 03.120
July 3	42 Sagittarii ψ	6	5	19 05 51.75	+4.375	19 05 47.375
June 6	43 Sagittarii *d*	5	5	19 08 23.24	+3.229	19 08 20.01
Aug. 19		5	5	24.14	4.350	19.79
Oct. 20		5	5	23.30	3.467	19.83
21		5	5	23.26	.451	19.81
Means		5				19 08 19.860
Aug. 16	1 Sagittæ	6	5	19 08 29.81	+3 445	19 08 26.37
22		6	5	30.00	.389	26.61
Sept. 18		6	5	29.49	2.996	26.49
19		6	5	29.45	.979	26.47
Means		6				19 08 26.485
July 3	1 Vulpeculæ	5	5	19 09 26.38	+3.381	19 09 22.999
June 6	57 Draconis δ	3	5	19 12 32.30	+2.740	19 12 29.56
July 3		3	5	33.46	3.229	30.23
4		3	3	32.98	.235	29.75
Aug. 16		3	5	31.99	2 517	29.47
Means		3				19 12 29.752

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Aug. 22	46 Sagittarii ν	5.6	5	19 12 41.34	+4.254	19 12 37.09
23		5.6	5	41.25	.247	37.00
Sept. 18		5.6	5	41.04	3.919	37.12
19		5.6	5	40.99	.920	37.07
Oct. 20		5.6	5	40.50	.412	37.09
Means		5.6				19 12 37.074
June 6	30 Aquilæ δ	3.4	5	19 17 31.78	+3.150	19 17 28.63
July 4		3.4	5	32.45	.661	28.79
Aug. 13		3.4	3	32.70	.841	28.86
16		3.4	5	32.61	.827	28.78
19		3.4	5	32.73	.809	28.92
22		3.4	5	32.78	.788	28.99
23		3.4	5	32.57	.781	28.79
Sept. 18		3.4	5	32.32	.474	28.85
19		3.4	5	32.46	.457	29.00
Oct. 20		3.4	5	31.96	2.951	29.01
21		3.4	5	31.74	.935	28.81
Means		3.4				19 17 28.857
Oct. 21	35 Aquilæ *c*	6	5	19 21 01.49	+2.985	19 20 58.505
June 6	2276 A. S. C.	6	5	19 21 31.15	+3.653	19 21 27.50
Aug. 19		6.7	5	32.02	4.476	27.54
28		6	5	32.17	.409	27.76
Means		6				19 21 27.600
Aug. 23	6 Vulpeculæ *b*	4	5	19 22 08.88	+3.366	19 22 05.51
Sept. 18		4.5	5	08.51	2.986	05.52
19		4.5	5	08.50	.969	05.53
Oct. 20		4	5	07.78	.371	05.41
Means		4				19 22 05.492
July 3	36 Aquilæ *e*	6	5	19 22 24.96	+3.757	19 22 21.20
4		6	5	24.45	.772	20.68
Means		6				19 22 20.940
Aug. 28	6 Cygni β^1	3	5	19 24 21.76	+3.225	19 24 18.54
Oct. 21		3	2	20.75	2.255	18.50
Means		3				19 24 18.515
June 6	2283 A. S. C.	7	5	19 25 10.68	+2.882	19 25 07.798
July 3	52 Sagittarii h^2	4.5	5	19 27 06.31	+4.345	19 27 01.97
4		4.5	5	05.92	.363	01.56
Aug. 23		4.5	5	06.05	.597	01.45

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1 1841.
				h. m. s.	s.	h. m. s.
Sept. 18	52 Sagittarii h^2	4.5	5	19 27 05.83	+4.291	19 27 01.54
19	cont'd.	4.5	5	05.72	.276	01.44
Oct. 20		4.5	5	05.32	3.742	01.58
Means		4.5				19 27 01.590
Aug. 28	9 Vulpeculæ	5.6	5	19 27 39.24	+3.430	19 27 35.810
Oct. 21	39 Aquilæ κ	5	5	19 28 23.32	+3.253	19 28 20.067
Aug. 19	42 Aquilæ P	6	5	19 29 25 09	+4.024	19 29 21.066
Aug. 23	44 Aquilæ σ	5.6	5	19 31 24.35	+3.781	19 31 20.57
28		5.6	5	24.53	.639	20.89
Sept. 18		5.6	5	24.22	.486	20.73
19		5.6	5	24.22	.472	20.75
Oct. 20		5	5	23.63	2.971	20.66
Means		5.6				19 31 20.720
July 3	54 Sagittarii e^1	5.6	5	19 31 41.12	+4.070	19 31 37.05
4		5.6	5	40.74	.087	36.65
Means		5.6				19 31 36.851
Oct. 21	5 Sagittæ α	4	5	19 33 01.99	+2.622	19 32 59.368
Aug. 19	2310 A. S. C.	6	5	19 34 33.49	+4.331	19 34 29.16
23		6	5	33.37	.309	29.06
Sept. 18		6	5	33.11	.033	29.08
19		6	5	33.10	.018	29.08
Oct. 20		6	5	32.79	3.520	29.27
Means		6				19 34 29.130
July 3	47 Aquilæ χ	6	5	19 35 08.90	+3.486	19 35 05.41
4		6	5	08.72	.499	05.22
Aug. 28		6	5	08.74	.618	05.12
Means		6				19 35 05.250
June 6	50 Aquilæ γ	3	5	19 38 45.24	+2.965	19 38 42.28
7		3	5	44.85	.989	41.86
July 3		3	5	45.81	3.500	42.31
4		3	5	45.54	.515	42.03
Aug. 13		3	5	45.37	.746	41.62
19		3	5	45.74	.720	42.02
23		3	5	45.66	.696	41.96
28		3	5	45.59	.657	41.93
Sept. 18		3	5	45.41	.404	42.01
19		3	5	45.34	.389	41.95
Oct. 20		3	5	44.95	2.878	42.07

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 21	50 Aquilæ γ	3	5	19 38 44.81	+2.861	19 38 41.95
Means		3				19 38 41.999
June 7	57 Sagittarii	5.6	5	19 43 00.72	+3.541	19 42 57.18
July 3		6	5	01.68	4.132	57.55
4		6	5	01.37	.150	57.22
Aug. 28		6	5	01.85	.415	57.44
Means		6				19 42 57.347
June 6	53 Aquilæ α	1.2	3	19 43 04.45	+2.999	19 43 01.45
Aug. 1		1.2	5	05.44	3.819	01.62
13		1.2	5	05.37	.822	01.55
19		1.2	5	05.27	.800	01.47
23		1.2	5	05.12	.777	01.34
Sept. 18		1.2	5	04.93	.498	01.43
19		1.2	5	04.85	.485	01.37
Oct. 20		1.2	5	04.37	2.985	01.39
Means		1.2				19 43 01.452
June 7	60 Aquilæ β	3.4	5	19 47 33.22	+3.020	19 47 30.20
July 3		3.4	5	33.90	.555	30.35
4		3.4	6	33.70	.572	30.13
Aug. 13		3.4	5	34.01	.850	30.26
19		3.4	5	33.85	.831	30.02
23		3.4	5	33.90	.810	30.09
28		3.4	5	33.85	.775	30.08
Sept. 18		3.4	5	33.75	.542	30.21
19		3.4	5	33.75	.529	30.22
Oct. 20		4	5	33.22	.036	30.18
21		4	5	33.18	.022	30.16
Means		3.4				19 47 30.173
Aug. 28	12 Sagittæ γ	4.5	5	19 51 44.73	+3.530	19 51 41.200
July 4	2349 A. S. C.	6	5	19 52 00.73	+4.251	19 51 56.479
June 7	62 Sagittarii c	4.5	5	19 52 56.02	+3.756	19 52 52.26
Sept. 18		4.5	5	56.73	4.523	52.21
19		4.5	5	56.65	.508	52.14
Oct. 21		4.5	5	56.27	3.958	52.31
Means		4.5				19 52 52.230
Aug. 28	2358 A. S. C.	6	5	19 55 04.13	+3.445	19 55 00.685
July 4	62 Aquilæ	6	5	19 56 15.33	+3.686	19 56 11.64
Oct. 21		6	5	14.93	.250	11.68
Means		6				19 56 11.662

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Sept. 18	14 Sagittæ *y*	6	5	19 56 16.91	+3.371	19 56 13.54
19		6	5	16.79	.357	13.43
Means		6				19 56 13.486
Aug. 28	2367 A. S. C.	7	5	19 59 34.88	+4.344	19 59 30.536
Sept. 18	64 Aquilæ	6	5	19 59 52.98	+3.765	19 59 49.22
19		6	5	52.75	.753	49.00
Oct. 21		6	5	52.53	.270	49.26
Means		6				19 59 49.160
June 7	17 Vulpeculæ *i*	5.6	3	20 00 05.90	+2.743	20 00 03.16
July 4		6	5	06.90	3.309	03.59
Means		5.6				20 00 03.374
Aug. 28	66 Draconis	5	5	20 03 03.08	+2.749	20 03 00.331
Oct. 21	65 Aquilæ θ	3.4	5	20 03 09.41	+3.291	20 03 06.119
June 7	18 Vulpeculæ	6	5	20 03 57.91	+2.688	20 03 55.22
July 4		6	5	58.74	3.263	55.48
Sept. 18		6	5	58.68	.174	55.51
19		6	5	58.49	.159	55.33
Means		6				20 03 55.385
June 7	5 Capricorni α^1	4	4	20 08 52.97	+3.281	20 08 49.689
June 7	6 Capricorni α^2	3	5	20 09 17.02	+3.281	20 09 13.74
Aug. 28		3	5	18.05	4.300	13.75
Sept. 18		3	5	17.62	.108	13.51
19		3	5	17.62	.096	13.52
25		3	5	17.70	.017	13.68
Oct. 23		3	5	17.04	3.587	13.45
Means		3				20 09 13.608
July 5	9 Capricorni β^2	3.4	5	20 12 08.28	+3.992	20 12 04.29
Sept. 25		3.4	5	08.35	4.092	04.26
Means		3.4				20 12 04.273
June 7		4.5	3	20 14 08.84	+2.080	20 14 06.76
July 4			3	10.71	3.309	07.40
Aug. 1			3	09.53	.347	06.18
28		4.5	3	09.26	2.198	07.06
29	1 Cephei κ	4.5	5	09.79	.135	07.66

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Sept. 18	1 Cephei κ	4.5	3	20 14 08.78	+ 0.624	20 14 08.16
19	cont'd.	4.5	5	08.20	.537	07.66
25		4.5	1	06.24	— 0.003	06.24
Oct. 23		4.5	5	04.78	2.810	07.59
Means		4.5				20 14 07.190
June 7	10 Capricorni π	5	5	20 18 16.04	+ 3.371	20 18 12.67
Aug. 28		5	5	17.41	4.491	12.92
Sept. 18		5	5	16.92	.310	12.61
Means		5				20 18 12.733
June 7	Ursæ Min. λ	5	1	20 20 48.53	+ 0.504	20 20 48.03
July 4		5	1	58.92	11.219	47.70
Sept. 18		5	1	25.11	—22.643	47.75
19		5	1	23.22	23.675	46.89
25		6	1	18.75	29.867	48.62
Oct. 23		4	1	19 38.58	61.938	40.52
Nov. 4		6	1	30.44	77.090	47.53
Means		5				20 20 46.720
Oct. 23	41 Cygni i	4.5	5	20 22 56.60	+2.561	20 22 54.039
Sept. 25	Capricorni υ	6	5	20 23 45.38	+4.009	20 23 41.371
Aug. 28	2414 A. S. C.	7	5	20 25 24.66	+4.372	20 25 20.29
Sept. 19		7	5	24 36	.196	20.16
Means		7				20 25 20.226
July 4	2 Delphini ε	4	5	20 25 40.22	+3.424	20 25 36.80
5		4	5	40.41	.443	36.97
Means		4				20 25 36.881
Oct. 23	3 Delphini η	6	5	20 26 28.70	+3.058	20 26 25.642
Sept. 25	2 Cephei θ	4.5	5	20 26 56.10	+2.055	20 26 54.045
June 7	4 Delphini ζ	5	5	20 27 55.21	+2.742	20 27 52.47
8		5	5	55.12	.768	52.35
Means		5				20 27 52.410
July 5	70 Aquilæ H	5.6	5	20 28 30.47	+3.673	20 28 26.797
Aug. 1	13 Capricorni τ^1	6	5	20 28 30.13	+4.358	20 28 25.77
2		6	5	30.17	.367	25.80
28		7	5	30.32	.421	25.90
Sept. 19		7	5	29.84	.248	25.59
Means		6.7				20 28 25.765

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
June 7	15 Capricorni ν	5	5	20 31 02.79	+3.308	20 30 59.48
8		5	5	02.94	.337	59.60
Aug. 2		5	5	03.87	4.454	59.42
28		5	5	04.28	.516	59.76
Sept. 25		5	5	03.69	.270	59.42
Oct. 17		5	5	03.11	3 942	59.17
Means		5				20 30 59.475
Sept. 19	2437 A. S. C.	5.6	5	20 31 40.04	+4.288	20 31 35.752
June 7	10 Delphini	6	5	20 33 52.47	+2.717	20 33 49.753
July 5	11 Delphini δ	5	5	20 36 05.90	+3.366	20 36 02.53
Aug. 1		5	3	05.96	.727	02.22
2		5	5	05.85	.735	02.12
28		5	5	06.09	.763	02.33
29		5	5	06.79	.758	02.03
Oct. 23		5	5	05.10	.069	02.03
Means		5				20 36 02.210
Sept. 25	16 Capricorni ψ	4.5	5	20 36 44.55	+4.522	20 36 40.03
Oct. 14		4.5	5	44.39	.231	40.16
17		4.5	5	44.25	.181	40.07
Means		4.5				20 36 40.087
June 7	30 Vulpeculæ	5.6	5	20 38 02.27	+2.561	20 37 59.71
8		5.6	5	02.30	.590	59.71
Means		5.6				20 37 59.704
Aug. 28	2 Aquarii ε	4.5	5	20 39 07.92	+4.288	20 39 03.63
29		4.5	5	08.03	.284	03.75
Oct. 23		4.5	5	07.30	3.667	03.63
Means		4.5				20 39 03.670
Sept. 25	13 Delphini λ	6	5	20 39 59.41	+3.709	20 39 55.70
26		5.6	5	59.58	.698	55.88
Oct. 14		5.6	5	59.23	.443	55.79
Means		5.6				20 39 55.790
Aug. 2	Microscopi α	5	5	20 40 06.53	+5.047	20 40 01.483
June 7	Cephei χ	5	5	20 41 26.64	+2.148	20 41 24.49
8		5	5	26.36	.186	24.17
Means		5				20 41 24.333

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 23	3 Cephei η	3.4	5	20 42 04.71	+1.225	20 42 03.485
June 7	6 Aquarii μ	4.5	5	20 44 07.35	+3.047	20 44 04.30
8		4.5	5	07.46	.077	04.38
Aug. 1		4.5	5	08.64	4.187	04.45
2		4.5	5	08.84	.198	04.64
Means		4.5				20 44 04.442
Oct. 23	31 Vulpeculæ τ	5.6	5	20 45 22.03	+2.829	20 45 19.201
Sept. 25	19 Capricorni	6	5	20 45 52.56	+4.323	20 45 48.24
26		6	5	52.79	.311	48.48
Oct. 14		6	5	52.41	.055	48.36
17		6	5	52.15	.009	48.14
Means		6				20 45 48.305
Aug. 1	16 Delphini χ	6	5	20 48 07.01	+3.767	20 48 03.24
2		6	5	07.35	.778	03.57
Means		6				20 48 03.407
June 8	17 Delphini μ	6	5	20 48 07.70	+2.694	20 48 05.006
Sept. 25	2482 A. S. C.	6.7	5	20 48 50.23	+4.279	20 48 45.95
26		6.7	5	50.46	.266	46.19
Oct. 14		6.7	5	50.07	.018	46.05
17		6.7	5	49.86	3.971	45.89
Means		6.7				20 48 46.020
Oct. 23	2483 A. S. C.	7	5	20 49 53.93	+3.408	20 49 50.522
Aug. 29	1 Equulei ε	5.6	5	20 51 11.69	+4.000	20 51 07.69
30		5.6	5	11.64	3.997	07.64
Means		5.6				20 51 07.666
Sept. 25	21 Capricorni	6	5	20 51 58.82	+4.333	20 51 54.487
Aug. 1	Cephei K	5	5	20 52 04.92	+3.356	20 52 01.56
2		5	5	05.77	.362	02.41
Sept. 26		5	5	04.61	2.615	02.00
Oct. 14		6	5	04.27	.053	02.22
17		6	5	03.95	1.951	02.00
Means		5				20 52 02.038
June 8	11 Aquarii τ	6	5	20 52 14.12	+2.958	20 52 11.162

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 23	Capricorni *n*	6.7	5	20 52 22.25	+4.204	20 52 18.046
Aug. 29	2 Equulei λ	6.7	5	20 54 26.07	+3.951	20 54 22.12
30		7	5	25.94	.949	21.99
Means		6.7				20 54 22.055
Oct. 23	22 Capricorni η	5	5	20 55 24.53	+4.015	20 55 20.52
24		5	5	24 73	3.999	20.73
Means		5				20 55 20.623
Aug. 1	3 Equulei ζ	6	5	20 56 43.10	+3.882	20 56 39.22
2		6	5	43.36	.893	39.47
Means		6				20 56 39.342
June 8	23 Capricorni θ	5.6	5	20 57 03.30	+3.178	20 57 00.12
Aug. 29		5.6	5	04.48	4.528	56 59.95
30		5.6	5	04.61	.526	57 00.08
Means		5.6				20 57 00.050
Sept 25	4 Equulei	6	5	20 57 37.62	+3.791	20 57 33.83
26		6	5	37.83	.779	34.05
Oct. 14		6	5	37.45	.542	33.91
17		6	5	37.29	.500	33.79
Means		6				20 57 33.895
Oct. 23	25 Capricorni χ^1	6	5	20 59 30.37	+4.070	20 59 26.30
24		5.6	5	30.59	.054	26.54
Means		5.6				20 59 26.418
Aug. 30	27 Capricorni χ^3	7	5	21 00 31.79	+4.636	21 00 27.155
Aug. 1	13 Aquarii ν	5	5	21 00 59.69	+4.231	21 00 55.46
2		5	5	59.80	.242	55.56
Sept. 25		5	5	59.71	.198	55.51
26		5	5	59.95	.187	55.76
Oct. 14		5	5	59.63	3.953	55.68
17		5	5	59.35	.910	55.44
Means		5				21 00 55.568
June 8	5 Equulei γ	5	5	21 02 39.40	+2.677	21 02 36.72
Oct. 23		5	5	39 89	3.350	36.54
24		5	5	39.87	.333	36.54
Means		5				21 02 36.600

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
June 8	64 Cygni ζ	3	5	21 06 12.76	+2.399	21 06 10.36
Aug. 1		3	5	13.56	3.545	10.02
2		3	5	13.96	.556	10.40
29		3	5	13.94	.624	10.32
30		3	5	13.89	.619	10.27
31		3	5	13.94	.616	10.32
Sept. 25		3	5	13.81	.377	10.43
26		3	5	13.79	.363	10.43
Oct. 14		3	5	13.63	.074	10.56
17		3	5	13.59	.021	10.57
23		3	5	13.19	2.912	10.28
24		3	5	13.36	.893	10.47
Dec. 18		3	5	12.37	.041	10.33
Means		3				21 06 10.366
Aug. 30	31 Capricorni	7	5	21 09 25.86	+4.548	21 09 21.31
Sept. 25		8	5	25.70	.390	21.31
26		8	5	25.96	.379	21.58
Oct. 14		8	5	25.49	.148	21.34
17		8	5	25.14	.104	21.04
Means		8				21 09 21.316
Aug. 2	2522 A. S. C.	7	5	21 10 28.84	+4.354	21 10 24.49
Oct. 23		7.8	5	28.26	3.988	24.27
24		7.8	5	28.37	.972	24.40
Means		7.8				21 10 24.387
Aug. 29	32 Capricorni ι	5	5	21 13 27.62	+4 534	21 13 23.09
30		5	5	27.58	.532	23.05
Sept. 25		5	5	27.30	.384	22.92
26		5	5	27.51	.375	23.14
Oct. 14		5	5	27.19	.147	23.04
17		5	5	27.01	.105	22.91
Means		5				21 13 23.025
June 8	5 Cephei α	3	5	21 14 48.46	+1.871	21 14 46.59
Aug. 1		3	5	50.36	3.424	46.94
2		3	5	49.90	.433	46.47
Oct. 23		3	5	48.77	1.736	47.03
24		3	5	48.42	.696	46.72
Dec. 18		3	5	46.69	0 434	46.26
Means		3				21 14 46.668
Sept. 25	19 Aquarii γ^2	6	5	21 16 44.15	+4.211	21 16 39.94
26		6	5	44.44	.202	40.24
Oct. 14		6	5	43.95	3.987	39.96
17		6	5	43.83	.945	39.89
Means		6				21 16 40.007

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1 1811.
				h. m. s.	s.	h. m. s.
Aug. 29	21 Aquarii	6	5	21 17 03.47	+4.207	21 16 59.26
30		5.6	5	03.40	.206	59.19
Means		5.6				21 16 59.228
June 9	35 Capricorni	6	5	21 18 16.52	+3.144	21 18 13.38
Aug. 2		6	5	17.87	4 486	13.38
Means		6				21 18 13.380
Aug. 30	36 Capricorni b	5.6	5	21 19 43.39	+4.691	21 19 38.70
Sept. 25		5.6	5	43.20	.549	38.65
26		5.6	5	43.54	.539	39.00
Oct. 14		5.6	5	43.13	.310	38.82
17		5.6	5	42.88	.267	38.61
Means		5.6				21 19 38.756
June 8	22 Aquarii β	3	5	21 23 13.91	+2.812	21 23 11.10
9		3	5	13.71	.843	10.87
Aug. 29		3	5	15.33	4.258	11.07
30		3	5	15.30	.257	11.04
31		3	5	15.17	.258	10.91
Sept. 25		3	5	15.19	.135	11.06
26		3	5	15.21	.126	11.08
Oct. 14		3	5	14.89	3.926	10.96
17		3	5	14.90	4.882	11.02
24		3	5	14.91	3.786	11.12
Dec. 18		3	5	14.32	.159	11.16
Means		3				21 23 10.945
April 28	8 Cephei β	3	3	21 26 34.16	—1.186	21 26 35.35
June 8		3	5	36.57	+1.539	35.03
Aug. 29		3	5	38.55	3.481	35.07
30		3	5	38.42	.461	34.96
31		3	5	38.46	.442	35.02
Sept. 25		3	5	37.91	2.668	35.24
26		3	5	37.61	.627	34.98
Oct. 14		3	5	36.93	1.769	35.16
17		3	5	36.69	.608	35.08
24		3	5	36.21	.221	34.99
Nov. 5		3	5	34.66	0.525	34.14
Dec. 3		3	5	33.97	—1.114	35.08
18		3	4	33.15	.897	35.05
Means		3				21 26 35.012
Sept. 26	5 Pegasi	5.6	5	21 30 22.94	+3.686	21 30 19.25
Oct. 14		6	5	22.81	.467	19.34

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 17	5 Pegasi	6	5	21 30 22.68	+3.425	21 30 19.26
Means		6				21 30 19.283
Oct. 24	4 Pegasi T'	5.6	5	21 30 37.72	+3.591	21 30 34.129
June 8	40 Capricorni γ	4	5	21 31 19.41	+2.965	21 31 16.45
9		4	5	19.32	.998	16.32
Aug. 1		4	5	20.70	4.309	16.39
2		4	5	20.68	.324	16.36
3		4	5	20.72	.339	16.38
Means		4				21 31 16.380
Aug. 30	25 Aquarii d	5.6	5	21 31 33.41	+4.111	21 31 29.30
31		5.6	5	33.07	.112	28.96
Means		5.6				21 31 29.128
Sept. 26	41 Capricorni	5	5	21 33 01.65	+4.619	21 32 57.03
Oct. 14		5.6	5	01.23	.402	56.83
Means		5				21 32 56.930
Oct. 24	43 Capricorni κ	5	5	21 33 50.15	+4.144	21 33 46.006
June 8	8 Pegasi ε	2.3	5	21 36 25.19	+2.516	21 36 22.67
Aug. 1		2.3	5	26.38	3.781	22.60
2		2.3	5	26.60	.795	22 81
3		2.3	5	26 46	.807	22.65
30		2.3	5	26.82	.989	22.83
31		2.3	5	26.53	.991	22.54
Sept. 26		2.3	5	26.61	.874	22.74
27		2.3	5	26.59	.865	22.73
Oct. 14		3	5	26.39	.674	22.72
17		2.3	5	26.18	.638	22.54
24		3	5	26.21	.545	22.67
Dec. 18		2.3	5	25.59	2.883	22.71
Means		2.3				21 36 22.684
June 8	49 Capricorni δ	3.4	5	21 38 18.41	+2.912	21 38 15.50
9		3.4	5	18.10	.944	15.16
Oct. 24		3.4	5	19.39	4.096	15.29
Dec. 18		3.4	5	18.92	3.430	15.49
Means		3.4				21 38 15.360
April 1	11 Cephei τ	5	3	21 39 29.31	—3.165	21 39 32.475
Aug. 2	2591 A. S. C.	7	5	21 40 46.16	+4.045	21 40 42.115

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 24	13 Pegasi	6	5	21 42 38.44	+3.444	21 42 34.996
Aug. 30	14 Pegasi	5.6	5	21 42 52.98	+3.745	21 42 49.235
July 7	51 Capricorni μ	5	5	21 44 40.77	+3.675	21 44 37.10
Aug. 2		5	5	41.70	4.213	37.49
3		5	5	41.26	.227	37.03
Sept. 26		5	5	41.61	.378	37.23
27		5	5	41.49	.368	37.12
Means		5				21 44 37.194
June 9	16 Pegasi B	5.6	5	21 45 51.90	+2.296	21 45 49.61
Aug. 30		5.6	5	53.89	3.797	50.09
Means		5.6				21 45 49.849
Oct. 24	Aquarii p	6.7	5	21 45 55.73	+3.871	21 45 51.849
July 7	17 Pegasi	6	5	21 49 14.48	+3.241	21 49 11.24
Aug. 3		6	5	15.06	.764	11.30
30		6	5	15.33	.977	11.35
Sept. 26		6	5	15.24	.891	11.35
27		6	5	15.12	.882	11.24
Means		6				21 49 11.296
Oct. 24	Aquarii C	7	5	21 49 56.79	+3.914	21 49 52.876
Oct. 24	28 Aquarii	6	5	21 53 00.62	+3.810	21 52 56.810
Aug. 3	19 Pegasi	6	5	21 53 19.60	+3.809	21 53 15.79
30		6	5	20.02	4.038	15.98
Means		6				21 53 15.886
July 7	20 Pegasi	6	5	21 53 23.89	+3.214	21 53 20.676
Sept. 26	29 Aquarii x	8	5	21 53 48.55	+4.484	21 53 44.07
27		8	5	48.31	.477	43.83
Means		8				21 53 43.949
July 7	34 Aquarii α	3	5	21 57 40.27	+3.379	21 57 36.89
Aug. 3		3	5	40.88	.923	36.96
Oct. 24		3	5	40.70	.850	36.85
25		3	5	40.75	.838	36.91
Dec. 18		3	5	40.27	.217	37.05
Means		3				21 57 36.932

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Sept. 26	33 Aquarii ι	4.5	5	21 57 55.07	+4.415	21 57 50.66
27		4.5	5	54.95	.408	50.54
Means		4.5				21 57 50.598
July 7	36 Aquarii	7	5	22 01 06.54	+3.494	22 01 02.05
Aug. 30		7	5	06.84	4.336	02.50
Sept. 27		7.8	5	06.30	.289	02.01
Means		7				22 01 02.280
Oct. 24	37 Aquarii	6.7	5	22 02 06.52	+4.076	22 02 02.44
25		7	5	06.54	.064	02.48
Means		6.7				22 02 02.460
Dec. 18	26 Pegasi θ	4	5	22 02 14.02	+3.115	22 02 10.905
Aug. 3	Piscis Aust. φ	5.6	5	22 04 52.22	+4.477	22 04 47.74
30		5.6	5	52.64	.780	47.86
Means		5.6				22 04 47.801
July 7	16 Piscis Aust. λ	6	5	22 05 21.10	+3.910	22 05 17.190
June 9	21 Cephei ζ	4	5	22 05 22.86	+1.682	22 05 21.18
Dec. 18		4	5	21.96	.078	20.88
Means		4				22 05 21.030
Sept. 27	41 Aquarii F	6	5	22 05 35.02	+4.610	22 05 30.410
July 7	43 Aquarii θ	4.5	5	22 08 29.80	+3.450	22 08 26.35
Aug. 3		4.5	5	30.32	4.040	26.28
30		4.5	5	30.83	.325	26.51
31		4.5	5	30.65	.330	26.32
Sept. 27		4.5	5	30.55	.297	26.25
Oct. 24		4.5	5	30.37	.043	26.33
25		4.5	5	30.31	.030	26.28
Dec. 18		4.5	5	29.74	3.402	26.34
Means		4.5				22 08 26.333
Sept. 27	46 Aquarii ρ	6	5	22 11 53.93	+4.306	22 11 49.624
July 7	30 Pegasi	6	5	22 12 30.86	+3.233	22 12 27.627
Aug. 30	47 Aquarii l	5	5	22 12 54.55	+4.656	22 12 49.89
31		5	5	54.67	.662	50.01
Means		5				22 12 49.951

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 24	48 Aquarii γ	4	5	22 13 30.40	+3.948	22 13 26.45
25		4	5	30.47	.936	26.53
Dec. 19		4	5	29.50	.310	26.19
Means		4				22 13 26.565
Sept. 27	2669 A. S. C.	6.7	5	22 15 15.77	+4.302	22 15 11.468
July 7	50 Aquarii	6	5	22 15 59.15	+3.515	22 15 55.635
Aug. 31	2673 A. S. C.	7	5	22 16 28.08	+4 208	22 16 23.872
Aug. 3	52 Aquarii π	5	5	22 17 13.33	+3.864	22 17 09.47
Oct. 24		5	5	13.29	.918	09.37
25		5	5	13 22	.907	09.31
Dec. 18		5	5	12.62	.290	09.33
Means		5				22 17 09.370
July 7	34 Pegasi H¹	6	5	22 18 35.14	+3.226	22 18 31.914
Sept. 27	35 Pegasi H²	5.6	5	22 19 52.82	+4.109	22 19 48.711
Aug. 3	55 Aquarii ζ	5	5	22 20 42.47	+3.875	22 20 38.60
30		4.5	5	43.12	4.185	38.94
31		4.5	5	42.85	.191	38.66
Oct. 24		4.5	5	42.49	3.957	38.53
25		4 5	5	42.63	.947	38.68
Dec. 18			5	41.84	.333	38.51
Means		4.5				22 20 38.653
Sept. 27	57 Aquarii σ	5.6	5	22 22 17.95	+4.386	22 22 13.564
July 7	17 Piscis Aust. β	4	5	22 22 30.72	+3.924	22 22 26.796
Oct. 25	58 Aquarii	6.7	5	22 23 19.32	+4.151	22 23 15.169
Dec. 18	27 Cephei δ	4.5	5	22 23 17.82	+1.410	22 23 16.410
July 7	39 Pegasi K	6 7	5	22 24 57.95	+3.025	22 24 54.93
8		6.7	5	57.77	.053	54.72
Means		6.7				22 24 54.821
Oct. 25	2697 A. S. C.	7	5	22 26 31.91	+3.964	22 26 27.946

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
July 8	62 Aquarii η	4	5	22 27 14.21	+3.272	22 27 10.94
Aug. 3		4	5	14.97	.860	11.11
Sept. 27		4	5	15.23	4.204	11.03
Dec. 18		4	5	14.44	3.371	11.07
Means		4				22 27 11.038
Aug. 31	61 Aquarii L	7	5	22 27 19.54	+4.533	22 27 15.007
Oct. 25	63 Aquarii κ	6	5	22 29 35.26	+4.057	22 29 31.203
Aug. 31	64 Aquarii	7	5	22 30 58.20	+4.366	22 30 53.83
Sept. 27		7.8	5	57.99	.388	53.60
Means		7				22 30 53.718
June 9	42 Pegasi ζ	3	5	22 33 34.21	+2.238	22 33 31.97
July 7		3	5	35.08	3.085	32.00
8		3	5	35.21	.113	32.10
Aug. 31		3	5	36.15	4.046	32.10
Sept. 1		3	5	35.89	.052	31.84
27		3	5	36.07	.069	32.00
Oct. 14		3	5	36.07	3.958	32.11
25		3	5	36.00	.851	32.15
Dec. 18			5	35.19	.229	31.96
Means		3				22 33 32.026
July 7	20 Piscis Aust. ψ^1	6	5	22 36 51.86	+3.628	22 36 48.23
8		6	5	51.77	.658	48.11
Means		6				22 36 48.172
Aug. 31	45 Pegasi	6	5	22 37 48.51	+3.967	22 37 44.54
Sept. 1		6	5	48.15	.973	44.18
27		7	5	48.41	.991	44.42
Oct. 14		6	5	48.41	.878	44.53
Means		6				22 37 44.418
Oct. 25	46 Pegasii ξ	4.5	5	22 38 49.15	+3.863	22 38 45.287
July 7	70 Aquarii	6	5	22 40 11.05	+3.329	22 40 07.72
8		6	5	11.13	.357	07.77
Means		6				22 40 07.747
Sept. 27	71 Aquarii τ^2	4.5	5	22 41 14.41	+4.475	22 41 09.94
Oct. 14		5	5	14.47	.373	10.10
Means		4.5				22 41 10.016

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App.AR.	Corr for prec. &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Oct. 25	48 Pegasi μ	4	5	22 42 24.06	+3.740	22 42 20.320
July 7	73 Aquarii λ	4	5	22 44 22.28	+3.261	22 44 19.02
8		4	5	22.12	.290	18.83
Sept. 1		4	5	22.91	4.312	18.63
27		4	5	23.29	.364	18 93
Oct. 14		4	5	23.47	.270	19.20
Means		4				22 44 18.925
Oct. 25	74 Aquarii K	6	5	22 45 10.40	+4.244	22 45 06.156
June 9	24 Piscis Aust. α	1	5	22 48 53.53	+2.672	22 48 50.86
July 7		1	5	54.60	3.637	50.96
8		1	5	54.57	.672	50.90
Aug. 31		1	5	55.90	4.829	51.07
Sept. 1		1	5	55.72	.837	50.88
27		1	5	55.80	.893	50.91
Oct. 14		1	5	55.71	.777	50.93
25		1	5	55.54	.653	50.89
26		1	5	55.53	.642	50.89
Means		1				22 48 50.921
Aug. 31	2 Piscium κ¹	6	5	22 51 22.74	+4.169	22 51 18 57
Sept. 1		6	5	22.19	.177	18.01
Means		6				22 51 18.292
July 7	3 Piscium κ²	6	5	22 52 31.76	+3.117	22 52 28.64
8		6	5	31.65	.145	28.51
Means		6				22 52 28.574
Sept. 27	2747 A. S. C.	7	5	22 52 41.05	+4.221	22 52 36 83
Oct. 26			5	40.92	.042	36.88
Means		7				22 52 36.853
Aug. 31	4 Piscium β	5	5	22 55 51.10	+4.130	22 55 46.97
Sept. 1		5	5	50.98	.138	46.84
Oct. 25		5	5	51.46	.057	47.40
26		5	5	51.18	.047	47.13
Means		5				22 55 47.085
June 9	54 Pegasi α	2	5	22 56 52 74	+2.066	22 56 50.67
July 7		2	5	53.72	.946	50.77
8		2	5	53.68	.974	50.71
Aug. 5		2	5	54.10	3.656	50.44
Sept. 27		2	5	54.82	4.101	50.72

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Oct. 14	54 Pegasi *α* cont'd.	2	5	22 56 54.47	+4.022	22 56 50.45
Dec. 12		2	5	53.92	3.391	50.53
Means		2				22 56 50.613
Sept. 1	56 Pegasi *h*	5.6	5	22 59 26.10	+3.965	22 59 22.14
Oct. 25		4.5	5	26.77	.856	22.91
26		4.5	5	26.55	.846	22.70
Means		4.5				22 59 22.583
July 8	88 Aquarii c^2	4.5	5	23 01 00.57	+3.404	23 00 57.17
Dec. 12		4.5	5	01.34	.882	57.46
Means		4.5				23 00 57.312
Aug. 5	57 Pegasi *m*	5.6	5	23 01 33.65	+3.700	23 01 29.950
Sept. 1	33 Cephei *π*	5	3	23 02 56.52	+5.039	23 02 51.481
Oct. 25	59 Pegasi *p*	6	5	23 03 46.80	+4.038	23 03 42.76
26		5.6	5	46 65	.032	42.62
Means		5.6				23 03 42.690
July 8	60 Pegasi	6	5	23 04 09.59	+2.853	23 04 06.74
Aug. 5		6	5	10.04	3.572	06.47
Dec. 12		6	5	10.27	.277	06.99
Means		6				23 04 06.733
Sept. 1	90 Aquarii *φ*	5	5	23 06 08.94	+4.261	23 06 04.68
Oct. 25		5	5	09.42	.227	05.19
26		4.5	5	09.22	.220	05.00
Means		5				23 06 04.957
July 8	6 Piscium *γ*	4.5	5	23 08 58.19	+3.071	23 08 55.12
Aug. 5		4.5	5	59.07	.779	55.29
Oct. 25		4.5	5	59.50	4.177	55.32
26		4.5	5	59.50	.170	55.33
Dec. 12		4.5	5	59.01	3.690	55.32
Means		4.5				23 08 55.276
Sept. 1	93 Aquarii ψ^2	5	5	23 09 41.94	+4.302	23 09 37.64
Nov. 23		5	5	42.21	3.987	38.22
Means		5				23 09 37.930
Aug. 5	7 Piscium *b*	6	3	23 12 17.51	+3.701	23 12 13.809

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1841.
				h. m. s.	s.	h. m. s.
Oct. 26	Aquarii T	6	5	23 12 50.79	+4.617	23 12 46.77
Dec. 12		6	5	50.21	3.999	46.21
Means		6				23 12 46.192
Sept. 1	62 Pegasi τ	5	5	23 12 50.30	+3.989	23 12 46.31
Nov. 23		5	5	50.27	.647	46.62
Means		5				23 12 46.467
July 8	66 Pegasi	6	5	23 15 06.39	+2.919	23 15 03.471
Aug. 5	2793 A. S. C.	6	5	23 15 45.04	+4.074	23 15 40.97
Oct. 26		7	5	45.17	.509	40.66
Dec. 12		6.7	5	44.78	3.943	40.84
Means		6.7				23 15 40.823
Sept. 1	99 Aquarii b^2	5	5	23 17 45.31	+4.498	23 17 40.812
July 8	8 Piscium κ^1	5.6	5	23 18 49.63	+3.000	23 18 46.63
Nov. 23		5.6	5	50.84	.915	46.92
Means		5.6				23 18 46.777
Oct. 26	9 Piscium κ^2	6.7	5	23 19 10.24	+4.182	23 19 06.06
Dec. 12		6	5	09.88	3.713	06.17
Means		6				23 19 06.112
Sept. 1	Cephei ε	5.6	3	23 20 39.91	+4.778	23 20 35.132
Nov. 23	12 Piscium ω^2	7	5	23 21 25.02	+3.953	23 21 21.067
July 8	2807 A. S C.	5	5	23 22 46.31	+2.623	23 22 43.687
Aug. 5	13 Piscium ω^3	7	5	23 23 51.83	+3.725	23 23 48.11
Oct. 26		7	5	52.25	4.223	48.03
Dec. 12		7	5	51.82	3.762	48.06
Means		7				23 23 48.066
Sept. 1	101 Aquarii b^4	5.6	5	23 25 01.03	+4.481	23 24 56.549
Nov. 23	71 Pegasi γ	5	5	23 25 34.69	+3.769	23 25 30.921
July 8	2814 A. S. C.	6.7	5	23 27 22 55	+3.039	23 27 19.511
Dec. 12	15 Piscium	7	5	23 27 24.78	+3.759	23 27 21.021
Aug. 5	2816 A. S. C.	6	5	23 27 52.29	+4.108	23 27 48.182

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	*s.*	*h. m. s.*
Nov. 23	16 Piscium	6	5	23 28 20.51	+3.960	23 28 16.550
July 8	17 Piscium ι	4.5	5	23 31 49.17	+2.894	23 31 46.28
Aug. 5		4.5	5	50.23	3.636	46.59
Sept. 1		4.5	5	50.16	4.096	46.06
2		4.5	5	50.70	.121	46.58
Oct. 26		4.5	5	50.60	.190	46.41
27		4.5	5	50.59	.185	46.41
Nov. 23		4.5	5	50.49	3.946	46.54
Means		4.5				23 31 46.416
Mar. 7	35 Cephei γ	3	3	23 32 47.04	—6.404	23 32 53.44
April 5		3	1	47.38	5.773	53.15
19		3	4	47.84	4.964	52.80
25		3	5	48.25	.533	52.78
May 15		3	5	51.50	2.810	54.81
16		3	5	50.21	.714	52.92
29		3	1	52.39	1.428	53.82
Dec. 5			3	55.41	+2.425	52.99
12		3	3	54.60	1.847	52.75
Means		3				23 32 53.218
July 8	18 Piscium λ	5	5	23 33 58.72	+2.913	23 33 55.81
Aug. 5		5	5	59.83	3.660	56.17
Sept. 1		5	5	59.71	4.125	55.59
2		5	5	34 00.29	.138	56.15
Oct. 26		5	5	00.39	.233	56.16
27		5	5	00.16	.226	55.93
Nov. 23		5	5	00.10	3.994	56.11
Means		5				23 33 55.989
Aug. 5	19 Piscium *m*	6	5	23 38 19.91	+3.630	23 38 16.28
Nov. 23		6	5	20.08	4.005	16.08
Dec. 12		6	5	19.81	3.808	16.00
Means		6				23 38 16.120
Sept. 1	Aquarii Y	6	5	23 39 08.35	+4.275	23 39 04.07
2		6	5	08.84	.290	04.55
Means		6				23 39 04.312
Oct. 26	App. Sculp. δ	5	5	23 40 42.46	+4.677	23 40 37.78
27		5	5	42.87	.667	38.20
Means		5				23 40 37.993

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Nov. 23	79 Pegasi	6.7	5	23 41 41.30	+3.868	23 41 37.43
Dec. 12		6	5	40.90	.633	37.27
Means		6				23 41 37.350
Sept. 1	108 Aquarii A^5	6	5	23 43 12.25	+4.376	23 43 07.87
2		6	5	12.73	.389	08.34
Means		6				23 43 08.107
Oct. 26	2853 A. S. C.	6	5	23 44 23.68	+4.441	23 44 19.24
27		6	5	24.20	.435	19.77
Means		6				23 44 19.502
Nov. 23	25 Piscium	6.7	5	23 45 00.29	+4.054	23 44 56.24
Dec. 12		6.7	5	44 59.89	3.859	56.03
Means		6.7				23 44 56.133
Aug. 5	26 Piscium	6.7	5	23 47 03.49	+3.573	23 46 59.92
Sept. 1		6	5	03.76	4.068	59.69
2		6.7	5	04.00	.082	59.92
30		6	5	04.08	.289	59.79
Oct. 26		6	5	04.06	.246	59.81
27		6	5	04.28	.240	47 00.04
Means		6				23 46 59 862
Nov. 23	84 Pegasi ψ	5.6	5	23 49 44.09	+3.963	23 49 40.13
24		5.6	5	43.85	.951	39.90
Dec. 12		5.6	5	43.75	.741	40.01
Means		5.6				23 49 40.013
Aug. 5	28 Piscium ω	4.5	5	23 51 12.67	+3.559	23 51 09.11
6		4.5	5	12.44	.581	08.86
Sept. 1		4.5	5	12.76	4.064	08.70
2		4.5	5	13.02	.079	08.94
Oct. 26		4.5	5	13.18	.264	08.92
27		4.5	5	13.26	.258	09.00
Means		4.5				23 51 08.922
Sept. 30	2866 A. S. C.	7	5	23 51 35.53	+4.449	23 51 31.081
Nov. 23	29 Piscium q	6	5	23 53 44.56	+4.132	23 53 40.43
24		6	5	44.60	.128	40.47
Dec. 12		5.6	5	44.19	3.943	40.25
Means		6				23 53 40.383

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1841.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1841.
				h. m. s.	s.	h. m. s.
Sept. 30	30 Piscium *r*	4.5	5	23 53 52.67	+4.403	23 53 48.267
Sept. 2	31 Piscium *c*¹	6.7	5	23 54 19.83	+4.063	23 54 15.767
Aug. 5	2 Ceti *g*	4	5	23 55 39.15	+3.762	23 55 35.39
6		4	3	39.35	.786	35.56
Oct. 26		4.5	5	39.57	4.504	35.07
27		4.5	5	39.96	.498	35.46
Means		4				23 55 35.370
Sept. 2	33 Piscium *s*	5	5	23 57 15.87	+4.166	23 57 11.70
Nov. 23		5.6	5	15.86	.170	11.69
24		5.6	5	15.85	.162	11.69
Dec. 12		5	5	15.51	3.977	11.53
Means		5				23 57 11.652

APPARENT RIGHT ASCENSION

OF THE

MOON'S OBSERVED LIMB.

Month and day.		Limb observed.	App. obs'd AR.			Month and day.		Limb observed.	App. obs'd AR.		
			h.	m.	s.				h.	m.	s.
Jan.	2	I	2	17	01.48	June	8	II	21	12	20.60
	3	I	3	17	53.07		9	II	21	58	32.46
	4	I	4	24	31.11		28	I	14	40	01.20
	8	II	9	01	04.58		29	I	15	33	41.35
	11	II	11	42	53.20		30	I	16	28	53.27
	30	I	2	52	49.60						
						July	1	I	17	24	45.22
Feb.	2	I	6	10	27.77		3	II	19	16	05.19
	3	I	7	19	09.04		4	II	20	07	24.16
	4	I	8	24	36.22		5	II	20	56	12.99
	5	II	9	27	53.53		7	II	22	28	02.24
	6	II	10	24	20.84		8	II	23	12	40.34
	7	II	11	17	25.19		26	I	15	16	17.46
	9	II	12	58	36.98		28	I	17	06	54.58
	10	II	13	49	04.17		29	I	18	02	28.85
	11	II	14	40	34.55						
	12	II	15	33	32.30	Aug.	1	I	20	38	26.31
	28	I	4	37	44.05		1	II	20	40	34.68
							2	II	21	27	59.70
March	1	I	5	44	02.70		3	II	22	13	41.89
	3	I	7	55	32.11		6	II	23	43	18.07
	7	II	11	42	32.26		6	II	0	29	35.81
	8	II	12	33	36.01		7	II	1	17	26.19
	14	II	17	56	18.99		23	I	15	51	27.37
							24	I	16	47	35.75
April	1	I	9	32	05.66		25	I	17	43	33.88
	2	I	10	25	55.36		28	I	20	21	44.67
	5	I	12	58	50.96		29	I	21	10	00.96
	5	II	13	01	03.38		30	I	21	56	28.86
	6	II	13	52	45.05		31	I	22	41	50.14
	27	I	8	17	08.27		31	II	22	43	58.78
	28	I	9	14	51.42						
						Sept.	1	II	23	29	00.26
May	1	I	11	49	48.99		2	II	0	14	52.38
	2	I	12	39	24.59		4	II	1	53	01.66
	3	I	13	29	51.33		5	II	2	47	16.81
	4	I	14	21	54.08		8	II	5	53	23.92
	6	II	16	13	46.60		21	I	17	21	54.43
	8	II	18	06	15.51		25	I	20	52	04.07
	28	I	11	34	33.94		26	I	21	39	08.21
	29	I	12	23	43.29		27	I	22	24	56.39
	31	I	14	04	00.03		30	II	0	46	08.52
June	2	I	15	51	15.50	Oct.	1	II	1	36	19.19
	3	II	16	49	30.07		3	II	3	27	52.48
	4	II	17	45	39.67		4	II	4	29	23.88
	5	II	18	40	45.67		5	II	5	33	25.70
	6	II	19	33	47.45		6	II	6	37	58.35
	7	II	20	24	16.86		18	I	16	57	09.52

APPARENT RIGHT ASCENSION OF THE MOON AND PLANETS.

RIGHT ASCENSION OF THE MOON—Continued.

Month and day.	Limb observed.	App. obs'd AR.			Month and day.	Limb observed.	App. obs'd AR.		
		h.	m.	s.			h.	m.	s.
Oct. 20	I	18	49	41.11	Nov. 24	I	0	49	31.78
21	I	19	42	19.78	27	I	3	37	02.52
23	I	21	19	51.03	29	II	5	51	57.70
24	I	22	05	50.33	30	II	6	58	51.26
25	I	22	51	07.42					
26	I	28	36	43.47	Dec. 1	II	8	02	47.97
27	I	0	23	45.30	3	II	9	58	33.11
29	I	2	06	27.66	5	II	11	42	46.64
					18	I	22	18	01.38
Nov. 2	II	6	18	16.62	26	I	5	14	32.73
4	II	8	23	18.82	28	II	7	33	08.01
5	II	9	20	41.40	30	II	9	36	37.41
23	I	0	01	41.54	31	II	10	32	28.04

RIGHT ASCENSION OF THE CENTRE OF MARS.

Date.	Limb observed.	Sidereal time of sem. passing.	App. AR.			Diff. from Nautical Almanac.
		s.	h.	m.	s.	s.
May 14	I	0.47	13	12	27.64	+0.44
15	I	0.47	13	11	43.88	+0.13
20	I	0.46	13	08	51.58	—0.04

RIGHT ASCENSION OF THE CENTRE OF JUPITER.

Date.	Limb observed.	Sidereal time of sem. passing.	App. AR.			Diff. from Nautical Almanac.
		s.	h.	m.	s.	s.
July 1	I	1.64	16	41	54.61	+0.24

RIGHT ASCENSION OF THE CENTRE OF THE GEORGIAN.

Date.	Limb observed.	Sidereal time of sem. pass'g.	App. AR.			Diff. from Nautical Almanac.
		s.	h.	m.	s.	s.
Oct. 27	Centre		23	27	38.03	—5.94

OCCULTATIONS
OF
STARS BY THE MOON.

Month and day.	Name of star.	Mag.	Mean time of observation.			Phase.	Power of telescope.	Remarks.
			h.	*m.*	*s.*			
Feb. 4	δ Cancri	4.5	17	06	24.3	Em.	47	Doubtful 1½*s*.
June 2	π Scorpii	3.4	8	19	05.7	Im.	47	Doubtful 1*s*.
2	π Scorpii	3.4	9	40	14.4	Em.	47	Doubtful 1½*s*.
4	*p* Sagittarii	5	9	06	14.6	Em.	47	Good.
29	Sagittarii	6.7	10	54	25.3	Im.	47	Star not in A. S. C.
July 28	*y* Ophiuchi	6	11	42	59.0	Im.	47	Good.
Aug. 1	19 Capricorni	6	15	58	50.4	Im.	47	Moon totally eclipsed.
Sept. 6	*b* Pleiadum	4.5	11	04	08.0	Im.	47	Good.
6	*b* Pleiadum	4.5	11	54	53.2	Em.	47	Good.
6	*g* Pleiadum	5.6	11	05	05.3	Im.	47	Good.
6	*g* Pleiadum	5.6	12	04	13.9	Em.	47	Good.
6	*e* Pleiadum	5	11	28	14.7	Im.	47	Good.
6	*e* Pleiadum	5	12	14	55.2	Em.	47	Good.
6	*c* Pleiadum	5	11	32	16.9	Im.	47	Good.
6	*c* Pleiadum	5	12	33	53.5	Em.	47	Good.
6	*k* Pleiadum	7	12	34	34.6	Em.	47	Good.
6	*l* Pleiadum	7	12	40	33.0	Em.	47	Good.
25	21 Capricorni	6	6	52	16.7	Im.	47	Good.
Oct. 6	ι Geminorum	3	16	39	02.2	Em.	47	Good ; Imm. cloudy.
Nov. 27	*b* Pleiadum	4.5	8	53	12.4	Im.	47	Good.
27	*g* Pleiadum	5.6	9	00	24.5	Im.	47	Good.
27	*c* Pleiadum	5	9	34	23.9	Im.	47	Good.
27	*e* Pleiadum	5	9	36	33.6	Im.	47	Good.
27	η Tauri	3	10	52	41.6	Em.	47	Doubtful.

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
1	21 Andromedæ	α	1	9	+28°13′	0 00 10.876	+3.071	+ .505	+ .086
2	88 Pegasi	γ	2.3	7	+14 18	0 05 03.217	+3.075	+ .032	— .104
3	36 Piscium		6 7	5	+ 7 21	0 08 24.098	+3.074	+ .584	
4	19 A. S. C.		6.7	2	+ 0 48	0 09 37.660	+3.069	+ .151	
5	40 Piscium		6.7	1	+15 22	0 11 43.685	+3.086	+ .689	
6	41 Piscium	d	5.6	5	+ 7 18	0 12 25.142	+3.077	— .375	
7	9 Ceti		6	2	—13 06	0 14 42.800	+3.049	+ .141	
8	26 A. S. C.		6.7	1	— 3 06	0 16 22.229	+3.063	— .004	
9	Phœnicis	α	2	4	—43 10	0 18 24.580	+2.970	+ .620	
10	48 Piscium		6	1	+15 34	0 19 57.544	+3.100	+ .695	
11	12 Ceti	n	6	2	— 4 50	0 21 55.530	+3.057	+ .243	
12	38 A. S. C.		6	1	—24 40	0 22 25.124	+3.009	— .344	
13	52 Piscium		6	1	+19 25	0 24 15.839	+3.116	+ .433	
14	47 A. S. C.		7	1	+ 9 26	0 25 56.779	+3.092	+ .477	
15	13 Ceti		6	2	— 4 28	0 27 03.930	+3.056	+1.004	
16	51 A. S. C.		6	1	— 1 23	0 27 23.132	+3.064	— .072	
17	18 Cassiopeæ	α	3	6	+55 40	0 31 31.358	+3.330	+ .628	+ .054
18	16 Ceti	β	2.3	6	—18 52	0 35 36.300	+2.998	+ .192	+ .019
19	34 Andromedæ	ξ	5	1	+23 24	0 38 55.243	+3.164	— .241	
20	60 Piscium		6	1	+ 5 52	0 39 10.453	+3.091	+ .762	
21	63 Piscium	δ	5	4	+ 6 43	0 40 26.295	+3.095	+ .140	
22	19 Ceti	ϕ^2	6	2	—11 30	0 42 09.710	+3.019	— .269	
23	20 Ceti	m	5	2	— 2 01	0 44 52.956	+3.059	— .293	
24	36 Andromedæ		6	1	+22 46	0 46 27.900	+3.179	+ .351	
25	22 Ceti	ϕ^3	6	2	—12 08	0 48 02.932	+3.009	+ .143	
26	23 Ceti	ϕ^4	6	2	—12 14	0 50 46.164	+3.005	+ .169	
27	Ap. Sculp.	α	5	2	—30 13	0 50 56.261	+2.898	— .177	
28	71 Piscium	ε	4	4	+ 7 02	0 54 41.775	+3.107	— .181	
29	27 Ceti		6	2	—10 50	0 57 38.915	+3.005	+ .100	
30	75 Piscium	H	6.7	1	+12 06	0 58 12.152	+3.139	+ .163	
31	31 Ceti	η	3.4	1	—11 01	1 00 35.629	+3.000	— .001	
32	1 Ursæ Min.	α	2.3	8	+88 28	1 02 26.117	+16.604	+10.297	—1.067
33	37 Ceti	b	6	1	— 8 47	1 06 23.479	+3.009	+ .480	
34	38 Ceti		6	1	— 1 50	1 06 42.461	+3.056	+ .255	
35	89 Piscium	f	6	1	+ 2 47	1 09 36.017	+3.087	+ .070	
36	90 Piscium	υ	5.6	1	+26 26	1 10 44.656	+3.269	+ .428	
37	144 A. S. C.		7	2	+ 0 54	1 14 25.969	+3.074	— .015	
38	45 Ceti	θ^1	3	2	— 9 00	1 16 04.650	+2.999	+ .111	— .004
39	157 A. S. C.		7	1	+16 15	1 19 51.618	+3.200	+ .498	
40	158 A. S. C.		7	1	+ 7 08	1 20 02.772	+3.124	— .202	
41	99 Piscium	η	4	3	+14 31	1 22 58.913	+3.190	— .066	
42	101 Piscium		6	1	+13 51	1 27 16.770	+3.190	+ .621	
43	173 A. S. C.		6	1	+16 37	1 27 19.065	+3.215	+ .310	
44	105 Piscium		6	2	+15 36	1 31 06.557	+3.211	— .014	
45	109 Piscium		6.7	1	+19 17	1 36 15.442	+3.257	+ .405	
46	52 Ceti	τ	3.4	1	—16 47	1 36 41.001	+2.903	+ .351	
47	110 Piscium	ο	5	1	+ 8 21	1 37 00.268	+3.148	+ .240	
48	193 A. S. C.		6	1	+21 29	1 41 22.174	+3.291	+ .423	
49	53 Ceti	χ^2	5	1	—11 28	1 41 46.597	+2.951	+ .625	
50	5 Arietis	γ	5	1	+18 31	1 44 48.994	+3.265	+ .110	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
51	6 Arietis β	3	4	+20°02′	1 45 52.132	+3.284	+ .819	
52	48 Cassiopeæ	5	1	+70 08	1 48 59.616	+4.754	—1.368	
53	9 Arietis λ	5.6	1	+22 49	1 49 04.882	+3.324	— .202	
54	50 Cassiopeæ	4.5	1	+71 39	1 49 58.653	+4.918	+ .145	
55	113 Piscium α	5	2	+ 2 00	1 52 49.456	+3.090	— .084	
56	13 Arietis α	3	4	+22 42	1 58 13.350	+3.342	+ .468	+ .062
57	15 Arietis	6	3	+18 45	2 01 49.517	+3.296	— .239	
58	64 Ceti	6.7	1	+ 7 49	2 02 57.869	+3.161	— .002	
59	65 Ceti ξ^1	5	4	+ 8 06	2 04 34.778	+3.165	+ .453	
60	67 Ceti F	6	1	— 7 09	2 09 03.346	+2.978	+ .368	
61	22 Arietis θ^1	6	3	+19 10	2 09 17.480	+3.316	+ .255	
62	69 Ceti	6	2	— 0 26	2 13 47.987	+3.063	+ .664	
63	70 Ceti	6	2	— 1 36	2 14 06.685	+3.047	+ .438	
64	71 Ceti	6	1	— 3 30	2 16 56.371	+3.022	— .111	
65	72 Ceti ρ	5	2	—13 00	2 18 16.892	+2.893	+ .229	
66	26 Arietis	6.7	1	+19 09	2 21 44.077	+3.336	+ .522	
67	27 Arietis ψ	6.7	2	+17 00	2 22 05.908	+3.304	+ .394	
68	76 Ceti σ	5	1	—15 56	2 24 33.404	+2.843	+ .281	
69	265 A. S. C.	6.7	3	+ 6 47	2 26 39.407	+3.164	+ .115	
70	81 Ceti d^2	6	1	— 4 05	2 29 41.431	+3.010	— .069	
71	32 Arietis ν	5.6	3	+21 16	2 29 48.210	+3.383	+ .578	
72	84 Ceti	6	1	— 1 22	2 33 05.537	+3.048	+ .739	
73	86 Ceti γ	3	6	+ 2 34	2 35 04.087	+3.105	+ .162	— .025
74	299 A. S. C.	4.5	1	+17 05	2 39 08.329	+4.292	+ .137	
75	42 Arietis π	5	3	+16 48	2 40 25.864	+3.328	+ .898	
76	2 Eridani τ^2	4.5	2	—21 39	2 43 49.686	+2.720	+ .186	
77	312 A. S. C.	7	1	+15 50	2 44 21.047	+3.317	+ .481	
78	46 Arietis ρ^3	6	1	+17 23	2 47 28.436	+3.347	+ .460	
79	48 Arietis ε	5	5	+20 42	2 50 07.898	+3.409	+ .239	
80	92 Ceti α	2.3	4	+ 3 27	2 53 58.435	+3.123	+ .182	— .036
81	10 Eridani ρ^3	6	1	— 8 14	2 56 28.227	+2.933	+ .404	
82	53 Arietis	6.7	3	+17 16	2 58 29.243	+3.358	+ .415	
83	54 Arietis	6.7	1	+18 11	2 59 20.996	+3.376	+ .760	
84	57 Arietis δ	4	5	+19 07	3 02 32.844	+3.398	+ .236	
85	58 Arietis ζ	5	1	+20 27	3 05 46.652	+3.428	+ .795	
86	13 Eridani ζ	4	1	— 9 25	3 08 06.961	+2.906	+ .325	
87	59 Arietis	6.7	1	+26 30	3 10 26.877	+3.559	+ .709	
88	16 Eridani	3.4	1	—22 20	3 12 27.080	+2.659	+ .641	
89	64 Arietis g	5.6	1	+24 09	3 14 55.722	+3.517	+ .075	
90	1 Tauri o	4.5	1	+ 8 28	3 16 15.981	+3.217	+ .364	
91	4 Tauri s	6	2	+10 47	3 21 43.525	+3.263	+ .252	
92	17 Eridani	4.5	1	— 5 37	3 22 44.000	+2.966	+ .124	
93	18 Eridani ε	4	2	—10 00	3 25 26.440	+2.884	— .734	
94	19 Eridani f^2	4	1	—22 10	3 26 45.848	+2.641	+ .107	
95	20 Eridani F	6	1	—18 00	3 29 03.008	+2.725	+ .403	
96	21 Eridani	6	1	— 6 08	3 31 10.372	+2.953	+ .459	
97	12 Tauri	6	1	+24 49	3 31 34.592	+3.114	+ .068	
98	Fornacis τ	6	1	—28 28	3 32 10.727	+2.489	— .292	
99	16 (Pleiadum) g	5.6	1	+23 47	3 35 21.611	+3.542	+ .249	
100	17 (Pleiadum) b	4.5	5	+23 36	3 35 26.778	+3.538	+ .350	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
101	25 Tauri η	3	6	+23°36′	3 38 02.702	+3.542	+ .550	+ .024
102	27 (Pleiadum) f	5	5	+23 34	3 39 43.100	+3.544	+ .497	
103	426 A. S. C.	6	1	—38 07	3 42 44.064	+2.202	+ .532	
104	31 Tauri υ^2	6	3	+ 6 03	3 43 31.917	+3.184	+ .743	
105	32 Eridani	5	1	— 3 26	3 46 18.285	+3.001	— .376	
106	33 Eridani l	5.6	4	—25 05	3 46 56.915	+2.545	+ .430	
107	34 Eridani γ^1	2.3	4	—13 58	3 50 36.805	+2.788	+ .188	+ .003
108	37 Tauri A^1	5	5	+21 39	3 55 18.298	+3.520	+ .498	
109	Eridani A	6	1	—28 05	3 59 04.471	+2.452	+ .809	
110	37 Eridani	5.6	1	— 7 20	4 02 37.347	+2.918	+ .199	
111	45 Tauri	6	1	+ 5 06	4 02 52.788	+3.171	+ .427	
112	48 Tauri	6.7	1	+15 00	4 06 44.991	+3.382	+ .409	
113	39 Eridani	5	1	—10 39	4 06 50.136	+2.846	+ .250	
114	49 Tauri μ	5	1	+ 8 29	4 06 54.205	+3.244	+ .142	
115	54 Tauri γ	3.4	1	+15 14	4 10 45.044	+3.391	+ .304	
116	57 Tauri h^1	6	1	+13 39	4 11 00.878	+3.356	+ .083	
117	59 Tauri χ	6	1	+25 15	4 12 55.188	+3.629	+ .714	
118	Eridani o^2	6	1	—26 06	4 14 55.677	+2.481	+ .376	
119	64 Tauri δ^2	4.5	1	+17 04	4 14 56.128	+3.436	+ .103	
120	69 Tauri υ^1	5	1	+22 27	4 16 48.312	+3.564	+ .968	
121	71 Tauri	5.6	1	+15 15	4 17 17.689	+3.396	+1.103	
122	43 Eridani	4.5	1	—31 23	4 18 04.123	+2.242	+ .401	
123	44 Eridani k^1	5.6	1	+ 1 01	4 20 19.666	+3.089	+ .777	
124	80 Tauri	6	1	+15 17	4 21 05.021	+3.399	+ .422	
125	45 Eridani k^2	5.6	1	— 0 23	4 23 45.259	+3.059	+ .810	
126	87 Tauri α	1	6	+16 11	4 26 48.240	+3.423	+ .497	+ .042
127	51 Eridani c	6	1	— 2 48	4 29 36.143	+3.007	+ .216	
128	92 Tauri σ^2	5.6	1	+15 36	4 30 11.260	+3.412	+ .008	
129	53 Eridani	4	1	—14 37	4 30 53.922	+2.745	+ .057	
130	94 Tauri τ	5	4	+22 39	4 32 42.645	+3.584	+ .311	
131	54 Eridani	4	1	—19 59	4 33 29.114	+2.616	— .032	
132	Eridani P	6	1	—24 48	4 33 30.477	+2.494	+ .273	
133	Cœli Sculp. β	5	3	—37 28	4 36 26.450	+2.111	+ .359	
134	552 A. S. C.	4.5	3	+66 04	4 38 17.483	+5.883	+ .532	
135	58 Eridani	6	3	—17 14	4 40 28.223	+2.678	+ .555	
136	1 Orionis q	4	1	+ 6 41	4 41 12.905	+3.251	— .146	
137	3 Orionis r	4	1	+ 5 20	4 42 44.562	+3.185	— .223	
138	60 Eridani	6	1	—16 30	4 43 01.765	+2.694	+ .631	
139	7 Camelop. b	5	3	+53 29	4 44 33.923	+4.774	+ .359	
140	61 Eridani ω	5	1	— 5 43	4 45 05.317	+2.941	+ .346	
141	9 Orionis o^2	5	2	+13 15	4 47 26.251	+3.367	+ .484	
142	62 Eridani b	6	2	— 5 26	4 48 34.551	+2.947	+ .294	
143	10 Camelop. d^1	4.5	1	+60 12	4 49 18.570	+5.288	+ .482	
144	10 Orionis s	5.6	1	+ 1 28	4 50 18.845	+3.100	+ .315	
145	102 Tauri ι	4.5	6	+21 21	4 53 35.940	+3.568	+ .532	
146	65 Eridani ψ	5	1	— 7 25	4 53 44.104	+2.901	+ .383	
147	104 Tauri m	5	2	+18 26	4 58 03.513	+3.496	— .139	
148	106 Tauri l^1	6	1	+20 12	4 58 24.409	+3.542	+ .678	
149	67 Eridani 3	3	2	— 5 18	5 00 02.232	+2.948	+ .124	
150	19 Orionis β	1	10	— 8 23	5 06 53.895	+2.876	+ .139	— .076

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
151	109 Tauri n	5.6	1	+21°56′	5 09 43.837	+3.592	+1.025	
152	20 Orionis r	4	2	— 7 01	5 09 53.393	+2.907	+ .016	
153	21 Orionis	6	1	+ 2 26	5 10 53.824	+3.123	+ .111	
154	629 A. S. C.	6	1	+29 24	5 11 06.332	+3.802	+ .349	
155	Columbæ o	5	1	—35 03	5 11 44.962	+2.151	+ .281	
156	6 Leporis λ	4.5	1	—13 21	5 12 15.172	+2.758	+ .454	
157	22 Aurigæ	7	1	+28 47	5 13 18.888	+3.786	+ .322	
158	112 Tauri β	2	8	+28 28	5 16 14.834	+3.780	+ .295	+ .094
159	658 A. S. C.	6	2	—12 02	5 19 40.582	+2.787	+1.375	
160	9 Leporis β	4	3	—20 53	5 21 26.110	+2.565	+ .065	
161	31 Orionis t	5	1	— 1 13	5 21 39.727	+3 039	+ .948	
162	34 Orionis δ	2	6	— 0 25	5 23 53.163	+3.058	+ .095	— .002
163	11 Leporis α	3.4	5	—17 56	5 25 43.116	+2.640	+ .146	— .088
164	46 Orionis ε	2.3	6	— 1 19	5 28 08.935	+3.037	+ .247	+ .035
165	125 Tauri	6	1	+25 48	5 29 53.209	+3.708	+ .811	
166	Columbæ α	2	5	—34 10	5 33 53.694	+2.167	+ .377	+ .008
167	13 Leporis γ	4	2	—22 30	5 37 50.245	+2.517	+ .268	
168	131 Tauri O	6	1	+14 25	5 38 09.963	+3.410	— .027	
169	130 Tauri N	6	1	+17 40	6 38 10.120	+3.491	+ .209	
170	132 Tauri B	5	1	+24 30	5 39 15.791	+3.674	+ .757	
171	53 Orionis κ	3	2	— 9 44	5 40 12.921	+2.839	+ .161	
172	136 Tauri C	5	5	+27 34	5 43 20.252	+3.764	+ .379	
173	58 Orionis α	1	11	+ 7 22	5 46 33.885	+3.241	+ .054	— .068
174	59 Orionis	6	2	+ 1 49	5 50 09 029	+3.110	+ .499	
175	60 Orionis B	6	2	+ 0 32	5 50 39.171	+3.080	+ .441	
176	64 Orionis χ^4	5.6	1	+19 41	5 54 02.742	+3.546	— .114	
177	3 Monocerotis	5.6	2	—10 36	5 54 21.778	+2.818	+ .500	
178	1 Geminorum H	5	1	+23 16	5 54 27.420	+3.642	+ .318	
179	62 Orionis χ^3	5	1	+20 08	5 54 28.671	+3.558	— .017	
180	17 Leporis ρ	5.6	1	—16 29	5 57 53.457	+2.673	+ .284	
181	67 Orionis ν	5	2	+14 47	5 58 29.772	+3.421	+ .521	
182	18 Leporis θ	5	1	—14 56	5 58 57.508	+2.712	— .184	
183	761 A. S. C.	5	3	+60 22	6 01 19.108	+6.616	+ .517	
184	Columbæ θ	5	1	—37 14	6 02 04.612	+2.053	+ .459	
185	68 Orionis E^1	6	1	+19 49	6 02 36.276	+3.550	+ .546	
186	1 Lyncis α	5	2	+61 33	6 03 14.866	+5.535	+ .361	
187	44 Aurigæ κ	4	1	+29 33	6 05 14.947	+3.825	+ .862	
188	7 Geminorum η	4.5	1	+22 33	6 05 16.449	+3.623	+ .026	
189	72 Orionis f^2	6	2	+16 11	6 06 15.146	+3.456	+ .480	
190	5 Monocerotis α	4.5	2	— 6 14	6 07 06.140	+2.922	+ .348	
191	75 Orionis l	6	1	+10 00	6 08 20.887	+3.303	— .086	
192	11 Geminorum	7.8	1	+23 32	6 09 38.656	+3.649	+ .677	
193	13 Geminorum μ	3	8	+22 35	6 13 20.486	+3 623	+ .443	+ .043
194	15 Geminorum	6.7	2	+20 53	6 18 17.950	+3.576	+ .394	
195	48 Aurigæ z	6	1	+30 35	6 18 20.942	+3.856	+ .276	
196	Canis Maj. D^1	5	2	—32 29	6 22 16.680	+2.221	— .031	
197	51 (Hev.) Cephei	5	3	+87 16	6 23 54.327	+30.862		—1.783
198	14 Monocerotis g	6	2	+ 7 41	6 26 09.714	+3.248	+ .256	
199	24 Geminorum γ	3	2	+16 32	6 28 31.358	+3.462	+ .265	
200	7 Canis Maj. ν^2	5	1	—19 07	6 29 45.062	+2.609	+ .263	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
201	8 Canis Maj. ν^3	5.6	2	—18°06′	6 30 54.003	+2.635	+ .358	
202	27 Geminorum ϵ	3	6	+25 17	6 34 08.825	+3.693	+ .312	
203	9 Canis Maj. α	1	8	—16 30	6 38 08.535	+2.643	+ .192	— .028
204	35 Geminorum	6	1	+13 35	6 41 26.704	+3.386	+ .008	
205	Arg. in pup. x	5	1	—37 45	6 41 55.821	+2.051	+ .930	
206	36 Geminorum d	6	1	+21 57	6 42 01.094	+3.598	+ .096	
207	38 Geminorum e^1	5.6	2	+13 23	6 45 40.359	+3.380	+ .289	
208	15 Canis Maj. π^1	5.6	1	—20 02	6 46 40.675	+2.591	+ .514	
209	18 Canis Maj. μ	5.6	1	—13 51	6 48 49.335	+2.746	+ .339	
210	20 Canis Maj. ι	4.5	2	—16 51	6 49 02.857	+2.673	+ .354	
211	21 Canis Maj. ϵ	2.3	7	—28 46	6 52 22.784	+2.354	+ .310	+ .042
212	43 Geminorum ζ	4	2	+20 48	6 54 40.600	+3.562	+ .208	
213	24 Canis Maj. o^2	4	1	—23 37	6 56 23.310	+2.502	+ .408	
214	23 Canis Maj. γ	5.6	1	—15 24	6 56 33.855	+2.711	+ .244	
215	45 Geminorum o	6	1	+16 11	6 59 14.900	+3.444	+ .346	
216	46 Geminorum τ	5	2	+30 30	7 01 00.934	+3.829	+ .455	
217	25 Canis Maj. δ	3.4	1	—26 09	7 01 55.571	+2.436	+ .125	
218	22 Monocerotis m	4.5	2	— 0 14	7 03 44.688	+3.063	+ .005	
219	51 Geminorum	5	1	+16 25	7 04 14.508	+3.447	+ .331	
220	53 Geminorum z	6	1	+28 10	7 06 00.537	+3.755	+ .012	
221	55 Geminorum δ	3.4	7	+22 16	7 10 37.554	+3.590	+ .424	+ .136
222	57 Geminorum A	6	1	+25 21	7 13 46.671	+3.670	+ .061	
223	59 Geminorum	6.7	1	+27 56	7 14 39.723	+3.741	+ .572	
224	60 Geminorum ι	4	1	+28 07	7 15 50.735	+3.744	+ .101	
225	3 Canis Min. β	3	4	+ 8 36	7 18 31.643	+3 259	+ .584	
226	924 A. S. C.	6	1	—28 50	7 21 40.707	+2.379	+ .178	
227	7 Canis Min. δ^1	6	1	+ 2 15	7 23 50.198	+3.118	+ .160	
228	68 Geminorum k	5	2	+16 10	7 24 31.729	+3.430	+ .059	
229	69 Geminorum υ	5	2	+27 15	7 26 07.180	+3.709	+ .061	
230	10 Canis Min. α	1.2	11	+ 5 38	7 30 58.566	+3.143	+ .143	+ .072
231	78 Geminorum β	2	13	+28 24	7 35 34.788	+3.682	+ .606	+ .032
232	82 Geminorum B	7	2	+23 32	7 39 02.800	+3.598	+ .632	
233	Arg. in pup. c	4	2	—37 35	7 39 35.665	+2.135	+ .090	
234	Arg. in pup. o	5.6	1	—25 33	7 41 28.735	+2.491	+ .444	
235	7 Argus ξ	4	2	—24 28	7 42 36.611	+2.520	+ .201	
236	83 Geminorum ϕ	5.6	2	+27 10	7 43 45.578	+3.686	+ .522	
237	85 Geminorum l	6	2	+20 18	7 46 22.914	+3.511	+ .233	
238	968 A. S. C.	6.7	1	+ 9 17	7 46 53.056	+3.264	+ .112	
239	Arg. in pup. b	5	1	—38 27	7 47 01.235	+2.121	+ .494	
240	1 Cancri	6.7	1	+16 13	7 47 57.718	+3.415	+ .623	
241	11 Argus	5.6	2	—22 27	7 50 01.748	+2.578	+ .160	
242	2 Cancri ω^1	6	1	+25 49	7 51 18.225	+3.641	+ .644	
243	3 Cancri	6	2	+17 44	7 51 40.431	+3.447	+ .464	
244	6 Cancri	6	1	+28 14	7 53 44.614	+3.701	+ .413	
245	Cancri	6	1	+19 15	7 55 33.598	+3.484		
246	8 Cancri	6	1	+13 34	7 56 12.891	+3.351	+ .290	
247	55 Camelop.	5	2	+68 55	7 56 55.290	+6.107	+1.043	
248	15 Argus	3.4	7	—23 51	8 00 46.597	+2.558	+ .639	— .037
249	1004 A. S. C.	7	2	+18 09	8 05 04.825	+3.444	+ .371	
250	20 Argus	5.6	2	—15 18	8 06 01.636	+2.756	+ .400	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

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					h. m. s.	s.	s.	s.
251	17 Cancri β	4	1	+ 9°40′	8 07 53.362	+3.262	+ .440	
252	21 Argus	6.7	2	—15 47	8 10 05.886	+2.750	+ .386	
253	19 Cancri λ	6	3	+24 31	8 11 04.470	+3.582	+ .498	
254	20 Cancri d^1	6	2	+18 50	8 14 15.278	+3.449	— .201	
255	21 Cancri *f*	7	1	+11 08	8 15 13.264	+3.288	+ .526	
256	22 Argus	6	2	—12 33	8 15 18.424	+2.821	+ .073	
257	23 Cancri ϕ^2	6.7	1	+27 27	8 17 09.503	+3.643	+ .270	
258	24 Cancri	7.8	1	+25 03	8 17 12.012	+3.586	+ .106	
259	30 Monocerotis *q*	5	1	— 3 24	8 17 42.813	+3.003	+ .190	
260	1029 A. S. C.	6	1	—23 32	8 18 12.084	+2.589	+ .765	
261	2 Hydræ	6	1	— 3 28	8 18 30.597	+3.002	+ .325	
262	28 Cancri υ^2	6.7	1	+24 40	8 19 10.766	+3.574	+ .742	
263	31 Cancri θ	5.6	3	+18 38	8 22 31.393	+3.436	+ .627	
264	33 Cancri η	6	1	+20 59	8 23 30.451	+3.485	+ .316	
265	4 Ursæ Maj. π^2	5	1	+64 53	8 26 14.232	+5.368	— .156	
266	1044 A. S. C.	6.7	3	+ 7 10	8 27 23.574	+3.204	+ .110	
267	4 Hydræ δ	4	2	+ 6 15	8 29 14.252	+3.185	+ .587	
268	39 Cancri	6	2	+20 34	8 30 57.206	+3.466	+ .380	
269	Pixid. Naut. η	6	2	—25 42	8 31 04.986	+2 560	+ .446	
270	9 Hydræ	5	1	—15 22	8 34 20.857	+2.781	+ .436	
271	47 Cancri δ	4.5	7	+18 44	8 35 38.547	+3.422	+ .395	
272	11 Hydræ ε	4	10	+ 7 00	8 38 21.154	+3.195	+ .149	— .067
273	54 Cancri	6.7	5	+15 56	8 42 09.782	+3.359	+ .573	
274	55 Cancri ρ^2	6	2	+28 56	8 43 06.938	+3.630	+ .058	
275	58 Cancri ρ^4	6	5	+28 32	8 46 07.580	+3.614	+ .556	
276	16 Hydræ ζ	4	1	+ 6 33	8 46 59.158	+3.183	— .465	
277	60 Cancri α^1	6	2	+12 14	8 47 14.433	+3.285	+ .368	
278	65 Cancri α^2	5	5	+12 28	8 49 47.172	+3.287	+ .345	
279	1098 A. S. C.	7	1	+18 45	8 50 11.761	+3.404	+ .497	
280	69 Cancri ν	6	6	+25 04	8 53 26.118	+3.525	+ .593	
281	18 Hydræ ω	6	4	+ 5 43	8 57 36 020	+3.165	+ .325	
282	76 Cancri κ	5.6	1	+11 18	8 59 07.732	+3.259	— .817	
283	77 Cancri ξ	5.6	1	+22 41	9 00 12.714	+3.465	+ .389	
284	1112 A. S. C.	5.6	1	—25 13	9 01 04.467	+2.625	+ .702	
285	Pixid. Naut. ε	6	1	—29 43	9 03 12.443	+2.536	+ .277	
286	1117 A. S. C.	7	1	+21 56	9 04 31.988	+3.443	+ .615	
287	21 Hydræ K^1	6	1	— 6 28	9 04 35.058	+2.964	+ .774	
288	18 Ursæ Maj. *e*	5	1	+54 40	9 04 42.187	+4.380	— .113	
289	82 Cancri π^2	6	1	+15 36	9 06 26.768	+3.326	+ .262	
290	23 Hydræ K^2	6	4	— 5 42	9 08 47.972	+2.978	+ .274	
291	83 Cancri *q*	6.7	2	+18 23	9 10 06.150	+3.369	+ .351	
292	26 Hydræ M^2	5.6	1	—11 18	9 12 07.066	+2.890	+ .516	
293	27 Hydræ	5.6	1	— 8 53	9 12 43.308	+2.929	+ .309	
294	1135 A. S. C.	5	1	+82 01	9 13 53 458	+9.478	—1.080	
295	Pixid. Naut. θ	5	2	—25 18	9 14 27.498	+2.650	+ .308	
296	1 Leonis κ	5	1	+26 52	9 15 23 267	+3.516	+ .371	
297	Pixid. Naut. λ	5.6	1	—28 09	9 16 19.588	+2.599	— .121	
298	30 Hydræ α	2	6	— 7 58	9 19 46.375	+2.948	+ .257	— .145
299	4 Leonis λ	4.5	2	+23 40	9 22 38.453	+3.441	+ .192	
300	5 Leonis ξ	5	2	+12 00	9 23 22.157	+3.249	— .062	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan 1.	Annual variation	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
301	6 Leonis h	6	1	+10°25′	9 23 25.964	+3.224	+1.000	
302	32 Hydræ τ^2	6	1	— 0 29	9 23 52.295	+3.062	+ .003	
303	8 Leonis	6.7	2	+17 09	9 28 15.794	+3.323	+ .281	
304	35 Hydræ ι	6	1	— 0 25	9 31 44.058	+3.063	+ .465	
305	14 Leonis ο	4	8	+10 37	9 32 39.593	+3.219	+ .444	
306	17 Leonis ε	3	8	+24 30	9 36 48.991	+3.426	+ .425	+ .035
307	29 Ursæ Maj. υ	4.5	2	+59 47	9 39 36.906	+4.356	—1.360	
308	20 Leonis	7	3	+21 55	9 40 55.677	+3.377	+ .280	
309	4 Sextantis s	6	2	+ 5 05	9 42 13.442	+3.136	+1.626	
310	24 Leonis μ	3	2	+26 45	9 43 42.486	+3.448	+ .438	
311	8 Sextantis d	6.7	3	— 7 22	9 44 38.170	+2.972	— .012	
312	9 Sextantis	7	2	+ 5 42	9 45 47.889	+3.143	+ .306	
313	10 Sextantis	6.7	1	+ 9 41	9 47 59.992	+3.193	— .061	
314	27 Leonis ν	5.6	7	+13 12	9 49 39.896	+3.238	+ .318	
315	29 Leonis π	4.5	2	+ 8 48	9 51 48.526	+3.179	+ .237	
316	1198 A. S. C.	6.7	5	+22 43	9 53 56.520	+3.362	+ .288	
317	1199 A. S. C.	7	2	—12 32	9 54 50.755	+2.914	— .109	
318	1202 A. S. C.	7	5	+16 32	9 57 02.914	+3.272	+ .192	
319	32 Leonis α	1	11	+12 45	9 59 53.945	+3.221	+ .224	— 0.80
320	34 Leonis	7	3	+14 09	10 03 04.483	+3.233	+ .160	
321	1215 A. S. C.	6.7	3	— 6 32	10 03 21.300	+2.994		
322	19 Sextantis	7	1	+ 5 24	10 04 31.843	+3.130	+ .433	
323	21 Sextantis	7	3	— 7 12	10 06 13.060	+2.988	+ .052	
324	1220 A. S. C.	7	3	+18 32	10 07 35.973	+3 281	+ .602	
325	36 Leonis ζ	4.5	1	+24 12	10 07 50.369	+3.353	+ .626	
326	40 Leonis	6	3	+20 17	10 11 04.483	+3.296	+ .247	
327	41 Leonis γ	2	5	+20 39	10 11 11.986	+3.300	+ .676	
328	43 Leonis z	6.7	5	+ 7 21	10 14 41.090	+3.145	+ .055	
329	Arg. in vel. r	4.5	1	—40 51	10 15 31.139	+2.558	— .049	
330	42 Hydræ μ	4	1	—16 02	10 18 24.083	+2.903	+ .300	
331	27 Sextantis	6.7	3	— 3 35	10 18 44.987	+3 033	+ .074	
332	Antl. Pneu. α	4.5	2	—30 16	10 19 53.175	+2.737	— .072	
333	28 Sextantis k	6	1	— 1 56	10 21 23.945	+3.050	+ .175	
334	31 Sextantis u	7	3	+ 2 58	10 22 18.117	+3.097	+ .790	
335	32 Sextantis x	7	3	+ 5 28	10 23 02.737	+3.121	+ .356	
336	47 Leonis ρ	4	1	+10 07	10 24 25.992	+3.166	+ .026	
337	48 Leonis	6	2	+ 7 46	10 26 30.186	+3.141	+ .355	
338	1 Hyd. & Crat.	6	3	—15 31	10 28 31.143	+2.924	+ .129	
339	2 Hyd. & Crat. ϕ^3	5	3	—16 03	10 30 50.440	+2.922	— .132	
340	1266 A. S. C.	5	2	+69 54	10 31 34.489	+4.459	— .530	
341	34 Sextantis	6	1	+ 4 25	10 34 24.879	+3.106	+1.593	
342	41 Leonis Min. m	5.6	2	+24 01	10 34 45.549	+3.287	+ .432	
343	35 Sextantis	6.7	3	+ 5 35	10 35 05.567	+3.116	+ .531	
344	37 Sextantis o^1	6.7	2	+ 7 13	10 37 48.704	+3.128	+ .516	
345	52 Leonis k	6	1	+15 02	10 37 59.699	+3.195	+ .284	
346	3 Hyd. & Crat. b^1	6	3	—16 27	10 39 05.020	+2.931	+ .359	
347	4 Hyd. & Crat. ν	4	3	—15 22	10 41 47.010	+2.945	+ .495	
348	41 Sextantis r	6	3	— 8 03	10 42 19.680	+3.005	+ .235	
349	6 Hyd & Crat. b^3	5.6	3	—19 17	10 45 43.187	+2.919	+ .288	
350	54 Leonis	5.6	3	+25 36	10 46 59.803	+3.271	+ .202	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
351	55 Leonis u	6	1	+ 1°35′	10 47 31.530	+3.080	+ .420	
352	57 Leonis	7	3	+ 1 17	10 48 01.313	+3.078	+ .275	
353	1299 A. S. C.	5	5	—36 17	10 49 19.446	+2.769	+ .117	
354	58 Leonis d	5	5	+ 4 28	10 52 20.936	+3.099	+ .367	
355	50 Ursæ Maj. α	1.2	7	+62 36	10 53 51.642	+3.811	— .039	— .001
356	63 Leonis χ	4.5	6	+ 8 12	10 56 48.812	+3.086	+ .616	
357	9 Hyd. & Crat. χ^1	5.6	4	—26 26	10 57 40.938	+2.889	+ .039	
358	Hyd. & Crat. χ^2	6.7	1	—26 26	10 58 15.554	+2.890	+ .116	
359	65 Leonis p^2	5.6	1	+ 2 49	10 58 47.492	+3.086	+ .036	
360	67 Leonis	6	2	+25 31	11 00 16.630	+3.234	+ .166	
361	10 Hyd. & Crat.	5.6	4	—27 13	11 01 02.960	+2.892	— .132	
362	66 Leonis p^3	7	3	— 0 28	11 01 06.613	+3.066	+ .157	
363	68 Leonis δ	3	11	+21 24	11 05 38.717	+3.193	+ .484	+ .100
364	74 Leonis φ	5	1	— 2 47	11 08 34.664	+3.054	+ .450	
365	75 Leonis q	5.6	1	+ 2 53	11 09 06.543	+3.083	+ .560	
366	Leonis	7	1	+12 51	11 10 03.000	+3.132		
367	12 Hyd. & Crat. δ	3.4	7	—13 55	11 11 23.789	+2.998	+ .081	— .115
368	77 Leonis σ	4	3	+ 6 54	11 12 56.080	+3.071	+ .529	
369	13 Hyd. & Crat. λ	6	3	—17 54	11 15 29.257	+2.984	— .297	
370	14 Hyd. & Crat. ε	5	2	— 9 59	11 16 34.880	+3.023	— .123	
371	15 Hyd. & Crat. γ	4	1	—16 49	11 16 56.819	+2.992	+ .627	
372	16 Hyd. & Crat. κ	6	3	—11 29	11 19 09.237	+3.020	+ .387	
373	85 Leonis	6	2	+16 18	11 21 24.682	+3.135	+ .767	
374	1 Draconis λ	3.4	1	+70 12	11 21 53.540	+3.695	—1.285	
375	87 Leonis e	4.5	3	— 2 08	11 22 11.577	+3.060	+ .067	
376	1353 A. S. C.	7	1	— 5 35	11 23 51.443	+3.047	+ .156	
377	17 Hyd. & Crat.	6	1	—28 23	11 24 24.323	+2.955	— .832	
378	19 Hyd. & Crat. ξ	4	4	—30 59	11 25 11.665	+2.945	+ .500	
379	89 Leonis H	6	2	+ 3 57	11 26 13.845	+3.082	+ .333	
380	1359 A. S. C.	6	2	+28 40	11 27 55.048	+3.172	+ .010	
381	91 Leonis υ	4.5	7	+ 0 03	11 28 49.593	+3.068	+ .335	
382	92 Leonis	5.6	2	+22 14	11 32 30.585	+3.135	+ :200	
383	27 Hyd. & Crat. ζ	4	4	—17 28	11 36 42.500	+3.025	+ .295	
384	2 Virginis ξ^1	5.6	3	+ 9 08	11 37 04.977	+3.090	+ .697	
385	3 Virginis ν	4.5	4	+ 7 25	11 37 41.128	+3.086	+ .152	
386	94 Leonis β	2.3	11	+15 28	11 40 56.685	+3.064	+ .211	— .083
387	5 Virginis β	3.4	3	+ 2 40	11 42 24.870	+3.124	+ .326	
388	64 Ursæ Maj. γ	2	10	+54 35	11 45 26.335	+3.192	+ .393	+ .080
389	29 Hyd. & Crat.	6	1	—27 35	11 47 35.832	+3.029	+ .183	
390	1383 A. S. C.	7	3	+ 4 22	11 50 04.800	+3.073	+ .057	
391	7 Virginis b	5.6	5	+ 4 33	11 51 48.254	+3.072	+ .122	
392	8 Virginis π	5	1	+ 7 30	11 52 43.704	+3.074	+ .280	
393	1 Comæ Ber.	6.7	5	+22 59	11 53 35.166	+3.085	+ .690	
394	1390 A. S. C.	7	3	+ 6 27	11 55 37.397	+3.071	— .354	
395	2 Comæ Ber.	6	1	+22 21	11 56 08.070	+3.079	+1.041	
396	9 Virginis ο	4.5	3	+ 9 37	11 57 06.459	+3.071	— .032	
397	1393 A. S. C.	7	2	— 2 15	11 57 51.356	+3.067	— .061	
398	1 Corvi α	4.5	4	—23 50	12 00 13.525	+3.067	+ .268	
399	10 Virginis r	6	3	+ 2 48	12 01 32.453	+3.068	+ .315	
400	2 Corvi ε	4	3	—21 44	12 01 57.573	+3.071	+ .292	

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
401	4 Comæ Ber.	6	1	+26°45′	12 03 46.668	+3.059	— .011	
402	5 Comæ Ber.	6	1	+21 26	12 04 03.708	+3.060	+ .413	
403	1404 A. S. C.	5	1	+78 30	12 04 40.708	+2.949	+ .169	
404	12 Virginis *t*	6	6	+11 09	12 05 20.032	+3.063	+ .399	
405	69 Ursæ Maj. δ	3	3	+57 55	12 07 31.437	+3.003	+ .824	
406	4 Corvi γ	3	1	—16 39	12 07 38.158	+3.080	+ .063	
407	6 Comæ Ber.	5	1	+15 47	12 07 55.897	+3.056	+ .711	
408	7 Comæ Ber. *h*	5.6	5	+24 50	12 08 17.526	+3.047	+ .219	
409	15 Virginis η	3.4	7	+ 0 13	12 11 46.330	+3.068	— .048	
410	5 Corvi ζ	5.6	3	—21 20	12 12 20.283	+3.095	+ .478	
411	11 Comæ Ber. *e*	5	1	+18 40	12 12 41.082	+3.044	+ .828	
412	6 Corvi ι	5.6	4	—23 57	12 15 05.247	+3.106	— .059	
413	13 Comæ Ber. *f*	5	5	+26 59	12 16 19.576	+3.021	+ .765	
414	14 Comæ Ber. *b*	5.6	1	+28 09	12 18 26.864	+3.012	+ .852	
415	1432 A. S. C.	6.7	4	— 3 44	12 19 42.435	+3.075	+ .210	
416	Centauri *u*	4.5	2	—38 09	12 19 56.546	+3.156	— .300	
417	1434 A. S. C.	7	3	+ 5 17	12 20 12.257	+3.057	+ .110	
418	19 Virginis	7	2	+10 36	12 22 29.042	+3.044	+ .368	
419	21 Comæ Ber. *g*	5.6	3	+25 27	12 23 04.003	+3.006	+ .217	
420	1443 A. S. C.	6.7	2	— 4 10	12 23 28.649	+3.078	+ .081	
421	8 Corvi η	4.5	1	—15 19	12 23 53.086	+3.105	— .329	
422	9 Corvi β	2.3	10	—22 31	12 26 02.876	+3.129	+ .667	+ 040
423	Hyd.&Crat. *d*	5.6	1	—26 15	12 29 17.522	+3.150	+ .612	
424	1458 A. S. C.	6.7	5	+ 2 44	12 30 16.118	+3.060	+ .078	
425	1459 A. S. C.	6.7	1	— 3 30	12 30 32.955	+3.079	— .164	
426	26 Comæ Ber. *m*	6	3	+21 56	12 31 12.417	+2.996	+ .591	
427	29 Virginis γ^1	3.4	4	— 0 34	12 33 36.582	+3.022	+ .550	
428	31 Virginis d^1	6	2	+ 7 11	12 33 53.772	+3.042	+ .240	
429	Hyd.&Crat. *e*	6	3	—27 27	12 35 33.007	+3.173	+ .294	
430	33 Virginis	6	5	+10 26	12 38 18.012	+3.027	+ .335	
431	34 Virginis	6	3	+12 50	12 39 13.353	+3.017	+ .146	
432	30 Comæ Ber.	6	4	+28 25	12 41 32.460	+2.939	+ .441	
433	1480 A. S. C.	6.7	2	— 9 28	12 43 07.014	+3.109	+ .325	
434	37 Virginis	6	3	+ 3 55	12 43 31.357	+3.051	+ .156	
435	35 Comæ Ber. *q*	5	1	+22 07	12 45 28.006	+2.962	+ .174	
436	40 Virginis ψ	5.6	4	— 8 40	12 46 05.620	+3.108	+ .102	
437	77 Ursæ Maj. ε	3	4	+56 49	12 47 00.982	+2.655	+ .847	
438	36 Comæ Ber. *r*	5	4	+18 16	12 51 03.715	+2.971	+ .704	
439	44 Virginis k^1	6.7	1	— 2 57	12 51 28.313	+3.083	+ .160	
440	37 Comæ Ber.	5	1	+31 39	12 52 39.675	+2.882	— .407	
441	47 Virginis ε	3.4	3	+11 49	12 54 15.770	+3.003	— .033	
442	48 Virginis k^4	6.7	4	— 2 48	12 55 43.090	+3.083	+ .297	
443	39 Comæ Ber. *t*	5.6	1	+22 01	12 58 36.178	+2.932	+ .236	
444	40 Comæ Ber.	6	2	+23 28	12 58 38.041	+2.922	+1.029	
445	49 Virginis *g*	5.6	2	— 9 53	12 59 34.408	+3.127	— .129	
446	51 Virginis θ	4.5	5	— 4 41	13 01 43.452	+3.097	+ .035	
447	53 Virginis	5.6	2	—15 20	13 03 36.503	+3.167	+ .596	
448	43 Comæ Ber. *w*	5	2	+28 41	13 04 26 780	+2.787	+1.213	
449	1516 A. S. C.	6	1	+12 24	13 04 38 043	+2.987	— .114	
450	55 Virginis	6	4	—19 06	13 05 41.150	+3.197	— .027	

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
451	57 Virginis	5.6	2	—19°06′	13 07 23.641	+3.201	+ .680	
452	59 Virginis e	6	1	+10 15	13 08 52.916	+2.997	— .171	
453	60 Virginis σ	5.6	2	+ 6 19	13 09 34.996	+3.024	+ .692	
454	2 Hydræ con. γ	4.5	2	—22 20	13 10 17.427	+3.232	+ .195	
455	Centauri ι	3	3	—35 52	13 11 40.947	+3.362	— .935	
456	62 Virginis	7	1	—10 28	13 11 59.225	+3.143	— .218	
457	64 Virginis u	7	1	+ 6 00	13 14 08.620	+3.023	— .043	
458	67 Virginis α	1	8	—10 20	13 16 49.462	+3.147	+ .135	— .047
459	70 Virginis w	5.6	2	+14 38	13 20 39.291	+2.948	— .039	
460	Hydræ con. u	7.8	1	—22 27	13 21 02.428	+3.257	+ .101	
461	75 Virginis	6	2	—14 32	13 24 22.475	+3.191	+ .374	
462	76 Virginis h	6	2	— 9 20	13 24 36.180	+3.146	+ .534	
463	79 Virginis ζ	4	1	+ 0 14	13 26 35.921	+3.066	— .065	
464	80 Virginis β	6	1	— 4 35	13 27 15.404	+3.107	+ .277	
465	Hydræ con. f	6.7	2	—25 41	13 28 00.270	+3.307	— .277	
466	Centauri t	6	1	—28 45	13 29 47.074	+3.345	— .311	
467	1 Bootis	6	3	+20 46	13 33 04.800	+2.868	+ .642	
468	82 Virginis m	5.6	1	— 7 54	13 33 16.698	+3.140	+ .348	
469	1 Centauri i	5	1	—32 14	13 36 40.577	+3.410	— .963	
470	Hydræ con. g	6	1	—25 19	13 36 45.745	+3.325	+ .220	
471	85 Virginis	6	1	—14 58	13 37 01.281	+3.213	— .252	
472	86 Virginis O	6	1	—11 37	13 37 28.390	+3.180	+ .200	
473	2 Centauri g	5	2	—33 39	13 40 15.327	+3.442	+ .025	
474	89 Virginis x	5.6	2	—17 20	13 41 14.420	+3.245	+ .025	
475	4 Centauri h	5	4	—31 08	13 44 01.780	+3.419	+ .131	
476	8 Bootis η	3	6	+19 12	13 47 06.883	+2.859	+ .254	+ .016
477	93 Virginis τ	4.5	1	+ 2 19	13 53 33.444	+3.042	— .008	
478	1600 A. S. C.	6.7	1	—14 12	13 55 51.022	+3.230	+ .002	
479	5 Centauri θ	2	3	—35 35	13 57 21.097	+3.491	— .394	
480	11 Draconis α	3.4	2	+65 08	14 00 05.305	+1.625	+ .860	
481	96 Virginis y	7	1	— 9 35	14 00 32.930	+3.180	+ .460	
482	98 Virginis κ	4	3	— 9 32	14 04 25.297	+3 183	— .076	
483	16 Bootis α	1	9	+20 01	14 08 24.686	+2.731	+ .356	— .013
484	100 Virginis λ	4 5	5	—12 38	14 10 30.958	+3.228	+ .190	
485	103 Virginis v^2	6	1	— 1 16	14 13 47.147	+3.083	+ .074	
486	2 Libræ	6	1	—10 59	14 14 53.091	+3.211	+1.130	
487	1636 A. S. C.	5.6	1	+ 6 32	14 16 16.589	+2.982	— .433	
488	8 Hydræ con.	5.6	2	—28 47	14 18 52.874	+3.483	+ .051	
489	25 Bootis ρ	4	2	+31 04	14 21 58.666	+2.592	+ .044	
490	5 Ursæ Min. A	4	1	+76 24	14 27 56.388	—0.269	— .623	
491	1651 A. S. C.	6.7	1	—11 38	14 28 32.931	+3.233	—2.222	
492	29 Bootis π	5	2	+17 06	14 33 15.406	+2.813	+ .853	
493	30 Bootis ζ	3.4	2	+14 24	14 33 33.607	+2.855	+ .732	
494	35 Bootis o	4.5	1	+17 38	14 37 49.730	+2.798	+ .722	
495	36 Bootis ε	3	9	+27 45	14 38 02.610	+2.621	+ .499	— .012
496	8 Libræ α^1	6	2	—15 20	14 41 54.155	+3.304	+ .031	
497	9 Libræ α^2	3	8	—15 22	14 42 05.606	+3.305	— .049	— .007
498	13 Libræ ξ^1	6	2	—11 14	14 45 45.570	+3.243	+ .427	
499	1690 A. S. C.	6	2	—20 40	14 48 11.624	+3.404	+3.030	
500	17 Libræ	7	1	—10 31	14 49 36.996	+3.234	+ .092	

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								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
501	18 Libræ		7	1	—10°30′	14 50 18.129	+3.234	+ .045	
502	7 Ursæ Min.	β	3	8	+74 48	14 51 13.973	—0.274	— .181	— .708
503	20 Libræ		3.4	5	—24 39	14 54 46.762	+3.490	+ .222	
504	22 Libræ	ν²	6.7	2	—15 52	14 57 57.074	+3.333	+ .571	
505	45 Bootis	c	5	2	+25 30	15 00 19.176	+2.617	+ .605	
506	24 Libræ	ι¹	5.6	7	—19 11	15 03 10.189	+3.400	— .151	
507	27 Libræ	β	2.3	10	— 8 47	15 08 27.495	+3.218	+ .107	+ .009
508	28 Libræ	υ	6.7	2	—17 34	15 11 53.556	+3.381	+ .135	
509	29 Libræ	υ¹	7	1	—14 58	15 12 08.674	+3.332	— .018	
510	1746 A. S. C.		6	1	—11 48	15 15 09.404	+3.277	+ .217	
511	31 Libræ	ε	5.6	2	— 9 45	15 15 35.193	+3.240	+ .033	
512	9 Serpentis		5.6	1	+15 59	15 18 25.100	+2.776	+ .444	
513	32 Libræ	ζ¹	6	3	—16 09	15 19 17.973	+3.362	— .159	
514	12 Draconis	ι	3	1	+59 31	15 21 24.106	+1.319	+ .437	
515	1758 A. S. C.		6	2	—19 07	15 23 29.531	+3.426	+ .345	
516	35 Libræ	ζ⁴	6	3	—16 18	15 23 56.823	+3.370	+ .523	
517	38 Libræ	γ	4.5	1	—14 15	15 26 38.624	+3.333	+ .051	
518	5 Cor. Bor.	α	2	12	+27 15	15 27 57.442	+2.526	+ .556	+ .048
519	43 Libræ	κ	5	4	—19 09	15 32 47.712	+3.438	+ .024	
520	24 Serpentis	α	2.3	12	+ 6 56	15 36 26.378	+2.936	+ .182	+ .005
521	1 Scorpii	b	5	8	—25 16	15 41 25.767	+3.585	+ .412	
522	2 Scorpii	A¹	5	9	—24. 51	15 44 04.668	+3.579	+ .489	
523	5 Scorpii	ρ	4	2	—28 45	15 47 04.874	+3.679	+ .105	
524	6 Scorpii	π	3.4	4	—25 39	15 49 14.728	+3.606	+ .032	
525	16 Ursæ Min.	ζ	4	4	+78 17	15 49 52.457	—2.384	+ .681	+ .767
526	7 Scorpii	δ	3	3	—22 10	15 50 56.523	+3.527	— .074	
527	3 Herculis		6	1	+ 4 53	15 52 57.905	+2.971	+ .324	
528	5 Herculis	τ	6	1	+18 16	15 54 05 780	+2.692	+ .368	
529	44 Serpentis	π	4.5	1	+23 15	15 55 27.115	+2.577	+ .728	
530	8 Scorpii	β¹	2	5	—19 22	15 56 12.074	+3.469	— .074	+ .035
531	10 Scorpii	ω²	4.5	1	—20 25	15 58 05.471	+3.496	+ .335	
532	Scorpii	m	6	1	—25 53	15 58 26.975	+3.626	+ .649	
533	13 Draconis	θ	3.4	1	+58 59	15 58 54.901	+1.147	—1.326	
534	45 Serpentis	g¹	6	2	+10 19	16 00 02.274	+2.857	+ .267	
535	12 Scorpii	c¹	6.7	1	—28 00	16 02 27 248	+3.685	+ .353	
536	15 Scorpii	χ	5.6	3	— 9 39	16 03 18.847	+3.265	+ .092	
537	1 Ophiuchi	δ	3	7	— 3 16	16 06 01.132	+3.135	+ .317	— .038
538	2 Ophiuchi	ε	3	1	— 4 18	16 09 54.711	+3.156	+ .145	
539	20 Scorpii	σ	4	7	—25 12	16 11 32.052	+3.626	+ .106	
540	20 Herculis	γ	3.4	4	+19 32	16 14 54.490	+2.643	+ .217	
541	21 Scorpii	α	1	13	—26 04	16 19 40.121	+3.659	— .158	— .039
542	14 Draconis	η	3	10	+61 53	16 21 50.720	+0.792	+ .528	— .162
543	27 Herculis	β	2.3	1	+21 50	16 23 23.470	+2.579	+ .841	
544	29 Herculis	h	4.5	1	+11 50	16 25 09.798	+2.811	— .343	
545	23 Scorpii	τ	3.4	3	—27 53	16 25 59.577	+3.715	— .168	
546	13 Ophiuchi	ζ	3.4	2	—10 14	16 28 24.465	+3.290	— .015	
547	33 Herculis		7	2	+ 7 26	16 29 08.281	+2.907	+ .394	
548	24 Scorpii		5	5	—17 26	16 32 22.932	+3.456	— .044	
549	25 Scorpii		6.7	1	—25 14	16 37 07.671	+3.656	— .555	
550	26 Scorpii	ε	3	1	—34 00	16 39 53.057	+3.870	+ .397	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.		Mag	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A
						h. m. s.	s.	s.	s.
551	47 Herculis	*k*	6	1	+ 7°32′	16 42 36.079	+2.901	— .142	
552	25 Ophiuchi	ι	4	2	+10 26	16 46 29.116	+2.834	+ .022	
553	1934 A. S. C.		6	1	—16 38	16 46 51.121	+3.444	+ .017	
554	54 Herculis		6	1	+18 42	16 48 23.079	+2.638	+ .271	
555	27 Ophiuchi	κ	4	3	+ 9 38	16 50 08.670	+2.852	— .041	
556	58 Herculis	ε	3	3	+31 10	16 54 12.377	+2.293	+ .334	
557	19 Draconis	*h*	5	1	+65 23	16 55 09.744	+0.266	+1.298	
558	60 Herculis		5	3	+12 58	16 58 00.367	+2.771	+ .076	
559	35 Ophiuchi	η	2.3	4	—15 31	17 01 15 810	+3.426	— .026	
560	22 Ursæ Min.	ε	4	8	+82 17	17 02 29.288	—6.577	+4.060	+ .592
561	29 Scorpii		6.7	2	—26 47	17 04 20.419	+3.722	— .223	
562	36 Ophiuchi	A	6	1	—26 21	17 05 34.827	+3.671	— .174	
563	64 Herculis	α	3.4	7	+14 35	17 07 24.003	+2.729	+ .424	— .025
564	22 Draconis	ζ	3	2	+65 55	17 08 19.156	+0.153	— .697	
565	42 Ophiuchi	θ	3.4	7	—24 50	17 12 15.004	+3.672	+ .072	
566	43 Ophiuchi	*y*	5	1	—27 59	17 13 21.401	+3.762	— .241	
567	1990 A. S. C.		6	1	—21 17	17 15 11.538	+3.578	— .070	
568	33 Scorpii		6	2	—24 05	17 15 23.347	+3.654	— .207	
569	44 Ophiuchi	*b*	5	1	—24 01	17 16 39.785	+3.652	— .197	
570	45 Ophiuchi	*d*	5	3	—29 43	17 17 12.457	+3.817	+ .010	
571	49 Ophiuchi	σ	4.5	1	+ 4 17	17 18 37.583	+2.969	— .026	
572	2003 A. S. C.		6	2	+20 13	17 19 57.465	+2.583	+ .372	
573	2004 A. S. C.		6	1	+ 0 28	17 20 43.389	+3.057	+ .202	
574	51 Ophiuchi	*e*²	5	2	—23 50	17 21 43.282	+3.649	— .167	
575	35 Scorpii	λ	3	1	—36 59	17 22 49.172	—4.060	— .138	
576	Ophiuchi	*h*	6	2	+ 2 51	17 23 23.211	+3.002	+ .139	
577	76 Herculis	λ	4.5	2	+26 14	17 24 18.941	+2.417	+ .254	
578	55 Ophiuchi	α	2	8	+12 41	17 27 33.341	+2.770	+ .441	+ .005
579	Scorpii	κ	3	1	—38 56	17 31 29.513	+4.139	— .026	
580	56 Serpentis	σ	4.5	3	—12 47	17 32 28.873	+3.369	+ .184	
581	27 Draconis	*f*	5	2	+68 14	17 32 36.377	—0.290	+ .537	
582	58 Ophiuchi	D	5	2	—21 36	17 33 54.361	+3.593	— .297	
583	3 Sagittarii	*p*	5	7	—27 46	17 37 33.303	+3.768	+ .355	
584	86 Herculis	μ	4	6	+27 49	17 40 14.370	+2.366	+ .514	
585	63 Ophiuchi	*z*	6.7	3	—24 51	17 45 06.977	+3.685	+ .002	
586	89 Herculis		5.6	2	+26 05	17 49 00.528	+2.415	+ .173	
587	64 Ophiuchi	ν	4	2	— 9 45	17 50 16.722	+3.297	+ .485	
588	32 Draconis	ξ	3.4	2	+56 54	17 50 46.970	+1.020	+ .980	
589	92 Herculis	ξ	4	1	+29 16	17 51 35.343	+2.320	+ .543	
590	93 Herculis	E	5	1	+16 46	17 52 58.408	+2.666	+ .432	
591	69 Ophiuchi	τ	5.6	1	— 8 10	17 54 25.572	+3.260	+ .482	
592	10 Sagittarii	γ²	3.4	3	—30 25	17 55 35.780	+3.852	— .282	
593	2084 A. S. C.		5	1	+76 59	17 56 35.654	—2.710	+2.924	
594	70 Ophiuchi	*p*	4.5	3	+ 2 33	17 57 25.270	+3.009	+ .251	
595	72 Ophiuchi	S²	4	1	+ 9 33	17 59 49.001	+2.843	+ .568	
596	103 Herculis	ο	4	1	+28 45	18 01 20.476	+2.335	+ .221	
597	13 Sagittarii	μ¹	3.4	4	—21 06	18 04 15.425	+3.583	+ .392	+ .119
598	Sagittarii	*g*	5.6	2	—27 06	18 08 06.057	+3.751	+ .156	
599	2104 A. S. C.		7	1	—18 31	18 08 08.689	+3.515	— .096	
600	19 Sagittarii	δ	3.4	2	—29 53	18 10 49.023	+3.835	+ .408	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
601	2106 A. S. C.	6	2	—15°52′	18 10 59.567	+3.447	+ .500	
602	105 Herculis G	5	1	+24 23	18 12 38.343	+2.463	+ .760	
603	2114 A. S. C.	6	3	—30 50	18 14 48.310	+3.864	— .224	
604	2117 A. S. C.	5.6	1	+23 12	18 15 30.971	+2.497		
605	22 Sagittarii λ	4	5	—25 30	18 18 09.450	+3.704	— .014	
606	23 Ursæ Min. δ	3	6	+86 36	18 23 36.898	—19.235	+7.557	— .330
607	Clypei Sob.	6.7	1	—17 2-	18 28 23.157	+3.483		
608	2152 A. S. C.	6	1	—23 38	18 28 50.406	+3.649	— .003	
609	26 Sagittarii	6	3	—23 58	18 32 09.683	+3.657	+ .136	
610	2159 A. S. C.	7	1	—14 42	18 32 39.027	+3.416	+ .181	
611	2 Aquilæ o	5	1	— 9 12	18 33 34.022	+3.282	+ .070	
612	27 Sagittarii φ	4.5	1	—27 09	18 35 43.143	+3.745	— .452	
613	28 Sagittarii	6	2	—22 33	18 36 45.076	+3.616	— .320	
614	4 Aquilæ	5.6	1	+ 1 54	18 36 48.428	+3.024	— .016	
615	46 Draconis C	5	1	+55 23	18 39 32.954	+1.162	+ .292	
616	111 Herculis M	5.6	1	+18 01	18 40 00.276	+2.640	+ .416	
617	29 Sagittarii r	6	1	—21 30	18 40 13.959	+3.560	+ .069	
618	34 Sagittarii σ	3	4	—26 29	18 45 24.285	+3.722	+ .053	
619	47 Draconis o	5	1	+59 12	18 48 51.765	+0.878	+1.417	
620	64 Serpentis	6	1	+ 2 20	18 49 17.189	+3.015	+ .434	
621	13 Aquilæ ε	3.4	4	+14 52	18 52 24.467	+2.723	+ .744	
622	12 Aquilæ i	5.6	1	— 5 57	18 53 11.437	+3.204	+ .063	
623	48 Draconis	5	2	+57 36	18 54 03.669	+1.021	+ .528	
624	39 Sagittarii o	4.5	2	—21 58	18 53 09.193	+3.592	+ .181	
625	40 Sagittarii τ	4	2	—27 54	18 57 00.645	+3.755	+ .320	
626	17 Aquilæ ζ	3	5	+13 38	18 58 06.156	+2.754	+ .502	+ .014
627	41 Sagittarii π	4.5	7	—21 16	19 00 18.290	+3.571	+ .079	
628	19 Aquilæ	6	1	+ 5 50	19 01 12.804	+2.937	+ .547	
629	2223 A. S. C.	7.8	1	—14 51	19 02 52.363	+3.410	+ .083	
630	20 Aquilæ B	5.6	5	— 8 12	19 04 03.120	+3.254	+ .306	
631	42 Sagittarii ψ	6	1	—25 31	19 05 47.375	+3.681	— .076	
632	43 Sagittarii d	5	4	—19 14	19 08 19.860	+3.514	+ .356	
633	1 Sagittæ	6	4	+20 58	19 08 26.485	+2.579	+ .736	
634	1 Vulpeculæ	5	1	+21 07	19 09 22.999	+2.576	+ .133	
635	57 Draconis δ	3	4	+67 23	19 12 29.752	+0.023	+ .399	
636	46 Sagittarii υ	5.6	5	—16 15	19 12 37.074	+3.439	+ .155	
637	30 Aquilæ δ	3.4	11	+ 2 48	19 17 28.857	+3.007	+ .460	+ .051
638	35 Aquilæ c	6	1	+ 1 38	19 20 58.505	+3.033	+ .372	
639	2276 A. S. C.	6	3	—21 38	19 21 27.600	+3.566	+ .204	
640	6 Vulpeculæ b	4	4	+24 21	19 22 05.492	+2.502	+ .670	
641	36 Aquilæ e	6	2	— 3 07	19 22 20.940	+3.137	+1.253	
642	6 Cygni β^1	3	2	+27 38	19 24 18.515	+2.416	+ .299	
643	2283 A. S. C.	7	1	+20 36	19 25 07.798	+2.600	+ .188	
644	52 Sagittarii h^2	4.5	6	—25 14	19 27 01.590	+3.654	+ .346	
645	9 Vulpeculæ	5.6	1	+19 26	19 27 35.810	+2.631	+ .569	
646	39 Aquilæ κ	5	1	— 7 22	19 28 20.067	+3.229	+ .020	
647	42 Aquilæ P	6	1	— 5 00	19 29 21.066	+3.177	+ .289	
648	44 Aquilæ σ	5.6	5	— 5 00	19 31 20.720	+2.960	— .450	
649	54 Sagittarii e^1	5.6	2	—16 39	19 31 36.851	+3.437	+ .354	
650	5 Sagittæ α	4	1	+17 39	19 32 59.368	+2.678	+ .360	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from— A. S. C.	Diff. in AR from— N. A
						h. m. s.	s.	s.	s.
651	2310 A. S. C.		6	5	—15°50′	19 34 29.130	+3.416	+ .534	
652	47 Aquilæ	χ	6	3	+11 28	19 35 05.250	+2.820	+ .430	
653	50 Aquilæ	γ	3	12	+10 14	19 38 41.999	+2.849	+ .070	+ .016
654	57 Sagittarii		6	4	—19 26	19 42 57.347	+3.494	+ .073	
655	53 Aquilæ	α	1.2	7	+ 8 27	19 43 01.452	+2.924	+ .098	— .029
656	60 Aquilæ	β	3.4	11	+ 6 01	19 47 30.173	+2.943	+ .140	+ .010
657	12 Sagittæ	γ	4.5	1	+19 04	19 51 41.200	+2.660	+ .520	
658	2349 A. S. C.		6	1	—23 10	19 51 56.479	+3.574	+ .145	
659	62 Sagittarii	ε	4.5	4	—28 09	19 52 52.230	+3.700	+ .110	
660	2358 A. S. C.		6	1	+24 22	19 55 00.685	+2.538	+ .297	
661	62 Aquilæ		6	2	— 1 09	19 56 11.662	+3.092	+ .030	
662	14 Sagittæ	y	6	2	+15 35	19 56 13.486	+2.742	+ .524	
663	2367 A. S. C.		7	1	—15 29	19 59 30.536	+3.390	+ .266	
664	64 Aquilæ		6	3	— 1 08	19 59 49.160	+3.092	+ .198	
665	17 Vulpeculæ	ι	5.6	2	+23 10	20 00 03.374	+2.573	— .339	
666	66 Draconis		5	1	+61 32	20 03 00.331	+0.952	+ .789	
667	65 Aquilæ	θ	3.4	1	— 1 17	20 03 06.119	+3.095	+ .284	
668	18 Vulpeculæ		6	4	+26 26	20 03 55.385	+2.499	+ .196	
669	5 Capricorni	α^1	4	1	—13 00	20 08 49.689	+3.330	+ .039	
670	6 Capricorni	α^2	3	6	—13 02	20 09 13.608	+3.331	— .013	— .019
671	9 Capricorni	β^2	3.4	2	—15 17	20 12 04.273	+3 375	+ .088	
672	1 Cephei	κ	4.5	8	+77 13	20 14 07.190	—1.882	+ .827	
673	10 Capricorni	π	5	3	—18 44	20 18 12.733	+3 443	— .050	
674	Ursæ Min.	λ	5	7	+88 50	20 20 46.720	—50.675		—1.168
675	41 Cygni	ι	4.5	1	+29 51	20 22 54.039	+2.446	+ .193	
676	Capricorni	υ	6	1	—10 24	20 23 41.371	+3 268	+1.023	
677	2414 A. S. C.		7	2	—14 16	20 25 20.226	+3.343	+ .359	
678	2 Delphini	ε	4	2	+10 46	20 25 36.881	+2.864	+ .227	
679	3 Delphini	η	6	1	+12 29	20 26 25.642	+2.831	+ .231	
680	2 Cephei	θ	4.5	1	+62 28	20 26 54.045	+1.016	+ .849	
681	4 Delphini	ζ	5	2	+14 08	20 27 52.410	+2 800	+ .430	
682	13 Capricorni	τ^1	6.7	4	—15 41	20 28 25.765	+3.369	+ .016	
683	70 Aquilæ	H	5.6	1	— 3 06	20 28 26.797	+3.126	+ .051	
684	15 Capricorni	ν	5	6	—18 41	20 30 59.475	+3.427	+ .258	
685	2437 A. S. C.		5.6	1	—16 41	20 31 35.752	+3.385	— .563	
686	10 Delphini		6	1	+14 01	20 33 49.753	+2.807	+ .446	
687	11 Delphini	δ	5	6	+14 31	20 36 02.210	+2.800	+ .100	
688	16 Capricorni	ψ	4.5	3	—25 50	20 36 40.087	+3.572	+ .645	
689	30 Vulpeculæ		5.6	2	+24 42	20 37 59.704	+2.594	+ .190	
690	2 Aquarii	ε	4.5	3	—10 04	20 39 03.670	+3.252	— .112	
691	13 Delphini	λ	5.6	3	+ 5 26	20 39 55.790	+2.971	+ .039	
692	Microscopi	α	5	1	—34 22	20 40 01.483	+3.771	+ .912	
693	Cephei	χ	5	2	+57 01	20 41 24.383	+1.500	+ .063	
694	3 Cephei	η	3.4	1	+61 13	20 42 03.485	+1.220	+2.035	
695	6 Aquarii	μ	4.5	4	— 9 34	20 44 04.442	+3.239	+ .223	
696	31 Vulpeculæ	τ	5.6	1	+26 30	20 45 19.201	+2.568	+ .403	
697	19 Capricorni		6	4	—18 31	20 45 48.305	+3.405	+ .230	
698	16 Delphini	χ	6	2	+11 58	20 48 03.407	+2.858	+ .559	
699	17 Delphini	μ	6	1	+13 07	20 48 05.006	+2.837	+ .409	
700	2482 A. S. C.		6.7	4	—16 38	20 48 46.020	+3.365	+ .125	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
701	2483 A. S. C.	7	1	+ 3°35′	20 49 50.522	+3.007	— .025	
702	1 Equulei ε	5.6	2	+ 3 41	20 51 07.666	+3.005	+ .211	
703	21 Capriconi	6	1	—18 09	20 51 54.487	+3.390	+ .157	
704	Cephei K	5	5	+56 17	20 52 02.038	+1.605		
705	11 Aquarii *r*	6	1	— 5 20	20 52 11.162	+3.160	— .018	
706	Capricorni *n*	6.7	1	—27 30	20 52 18.046	+3.578	+ .188	
707	2 Equulei λ	6.7	2	+ 6 34	20 54 22.055	+2.957	— .092	
708	22 Capricorni η	5	2	—20 29	20 55 20.623	+3.430	— .313	
709	3 Equulei ζ	6	2	+ 4 53	20 56 39.342	+2.987	+ .215	
710	23 Capricorni θ	5.6	3	—17 52	20 57 00.050	+3.378	+ .292	
711	4 Equulei	6	4	+ 5 20	20 57 33.895	+2.979	+ .386	
712	25 Capricorni χ^1	5.6	2	—21 49	20 59 26.418	+3.449	— .221	
713	27 Capricorni χ^3	7	1	—21 11	21 00 27.155	+3.435	+ .180	
714	13 Aquarii ν	5	6	—12 01	21 00 55.568	+3.270	+ .498	
715	5 Equulei γ	5	3	+ 9 30	21 02 36.600	+2.912	+ .288	
716	64 Cygni ζ	3	13	+29 35	21 06 10.366	+2.546	+ .640	— .014
717	31 Capricorni	8	5	—18 07	21 09 21.316	+3.366	— .480	
718	2522 A. S. C.	7.8	3	—16 51	21 10 24.387	+3.342	— .085	
719	32 Capricorni ι	5	6	—17 30	21 13 23.025	+3.350	— .255	
720	5 Cephei α	3	6	+61 54	21 14 46.668	+1.416	+ .852	+ .018
721	19 Aquarii y^2	6	4	—10 25	21 16 40.007	+3.230	+ .347	
722	21 Aquarii	5.6	2	— 4 14	21 16 59.228	+3.133	— .075	
723	35 Capricorni	6	2	—21 53	21 18 13.380	+3.418	+ .322	
724	36 Capricorni *b*	5.6	5	—22 30	21 19 38.756	+3.426	+ .400	
725	22 Aquarii β	3	11	— 6 16	21 23 10.945	+3.162	+ .613	— .143
726	8 Cephei β	3	13	+69 52	21 26 35.012	+0.811	+1.021	— .003
727	5 Pegasi	6	3	+18 36	21 30 19.283	+2.795	+ .858	
728	4 Pegasi T^1	5.6	1	+ 5 03	21 30 34.129	+2.997	+ .422	
729	40 Capricorni γ	4	5	—17 23	21 31 16.380	+3.322	+ .218	
730	25 Aquarii *d*	5.6	2	+ 1 32	21 31 29.128	+3.047	— .209	
731	41 Capricorni	5	2	—23 59	21 32 56.930	+3.426	— .106	
732	43 Capricorni κ	5	1	—19 35	21 33 46.006	+3.353	+ .163	
733	8 Pegasi ε	2.3	12	— 9 09	21 36 22.684	+2.942	+ .222	+ .018
734	49 Capricorni δ	3.4	4	—16 51	21 38 15.360	+3.304	+ .206	
735	11 Cephei τ	5	1	+70 35	21 39 32.475	+0.892	+ .363	
736	2591 A. S. C.	7	1	— 6 08	21 40 42.115	+3.151	+ .314	
737	13 Pegasi	6	1	+16 33	21 42 34.996	+2.844	+ .562	
738	14 Pegasi	5.6	1	+29 26	21 42 49.235	+2.643	+ .442	
739	51 Capricorni μ	5	5	—14 18	21 44 37.194	+3.259	+ .605	
740	16 Pegasi B	5.6	2	+25 11	21 45 49.849	+2.721	+ .218	
741	Aquarii *p*	6.7	1	— 5 01	21 45 51.849	+3.134	+ .065	
742	17 Pegasi	6	5	+11 20	21 49 11.296	+2.924	+ .562	
743	Aquarii C	7	1	— 6 10	21 49 52.876	+3.147	+ .359	
744	28 Aquarii	6	1	— 0 09	21 52 56.810	+3.071	+ .359	
745	19 Pegasi	6	2	+ 7 30	21 53 15.886	+2.976	+ .170	
746	20 Pegasi	6	1	+12 22	21 53 20.676	+2.914	+ .432	
747	29 Aquarii *x*	8	2	—17 43	21 53 43.949	+3.293	—1.134	
748	34 Aquarii α	3	5	— 1 05	21 57 36.932	+3.082	+ .150	— .007
749	33 Aquarii ι	4.5	2	—14 38	21 57 50.598	+3.247	— .109	
750	36 Aquarii	7	3	— 8 58	22 01 02.280	+3.174	+3.316	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

Nr.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
751	37 Aquarii	6.7	2	−11°36′	22 03 02.460	+3.204	+ .186	
752	26 Pegasi θ	4	1	+ 5 25	22 02 10.905	+3.006	+ .219	
753	Piscis Aust. φ	5.6	2	−25 58	22 04 47.801	+3.384	+ .677	
754	16 Piscis Aust. λ	6	1	−28 32	.22 05 17.190	+3.419	+ .441	
755	21 Cephei ζ	4	2	+57 25	22 05 21.030	+2.064	+1.246	
756	41 Aquarii F	6	1	−21 52	22 05 30.410	+3.327	− .007	
757	43 Aquarii θ	4.5	8	− 8 34	22 08 26.333	+3.163	+ .260	
758	46 Aquarii ρ	6	1	− 8 37	22 11 49.624	+3.161	− .437	
759	30 Pegasi	6	1	+ 5 00	22 12 27.627	+3.016	+ .431	
760	47 Aquarii l	5	2	−22 23	22 12 49.951	+3.318	+ .443	
761	48 Aquarii γ	4	3	− 2 11	22 13 26.585	+3.092	+ .253	
762	2669 A. S. C.	6.7	1	− 8 00	22 15 11.468	+3.152	+ .306	
763	50 Aquarii	6	1	−14 20	22 15 55 635	+3.219	− .024	
764	2673 A. S. C.	7	1	− 1 59	22 16 23.872	+3.089	+ .763	
765	52 Aquarii π	5	4	+ 0 34	22 17 09.370	+3.063	+ .257	
766	34 Pegasi H¹	6	1	+ 3 35	22 18 31.914	+3.033	+ .761	
767	35 Pegasi H²	5.6	1	+ 3 54	22 19 48.711	+3.030	+ .751	
768	55 Aquarii ζ	4.5	5	− 0 50	22 20 38.653	+3.077	+ .426	
769	57 Aquarii σ	5.6	1	−11 29	22 22 13.564	+3.182	− .178	
770	17 Piscis Aust. ϑ	4	1	−33 10	22 22 26.796	+3.431	− .325	
771	58 Aquarii	6.7	1	−11 43	22 23 15.169	+3.183	+ .036	
772	27 Cephei δ	4.5	1	+57 36	22 23 16.410	+2.204	+ .716	
773	39 Pegasi K	6.7	2	+19 25	22 24 54.821	+2.878	+ .543	
774	2697 A. S. C.	7	1	− 0 13	22 26 27.946	+3.071	+ .225	
775	62 Aquarii η	4	4	− 0 56	22 27 11.038	+3.077	+ .211	
776	61 Aquarii L	7	1	−18 17	22 27 15.007	+3.243	+1.074	
777	63 Aquarii κ	6	1	− 5 03	22 29 31.203	+3.114	− .091	
778	64 Aquarii	7	2	−10 51	22 30 53.718	+3.166	− .308	
779	42 Pegasi ζ	3	8	+10 00	22 33 32.026	+2.981	+ .295	+ .038
780	20 Piscis Aust. ψ¹	6	2	−26 04	22 36 48.172	+3.302	− .090	
781	45 Pegasi	6	4	+18 32	22 37 44.418	+2.910	+ .578	
782	46 Pegasi ξ	4.5	1	+11 22	22 38 45.287	+2.975	+ .552	
783	70 Aquarii	6	2	−11 23	22 40 07.747	+3.161	− .674	
784	71 Aquarii τ²	4.5	2	−14 26	22 41 10.016	+3.185	− .129	
785	48 Pegasi μ	4	1	+23 46	22 42 20.320	+2.872	+1.068	
786	73 Aquarii λ	4	5	− 8 25	22 44 18.925	+3.133	+ .332	
787	74 Aquarii K	6	1	−12 28	23 45 06.156	+3.164	+ .592	
788	24 Piscis Aust. α	1	9	−30 28	22 48 50.921	+3.311	+ .160	+ .001
789	2 Piscium x¹	6	2	+ 0 07	22 51 18 292	+3.068	+ .024	
790	3 Piscium x²	6	2	− 0 40	22 52 28.574	+3.073	− .019	
791	2747 A. S. C.	7	2	+ 2 10	22 52 36.853	+3.054	+ .409	
792	4 Piscium β	5	4	+ 2 58	22 55 47.085	+3.049	+ .296	
793	54 Pegasi α	2	7	+14 21	22 56 50.613	+2.975	+ .178	+ .086
794	56 Pegasi h	4.5	3	+24 37	22 59 22.583	+2.907	+ .176	
795	88 Aquarii c²	4.5	2	−22 02	23 00 57.312	+3.008	− .336	
796	57 Pegasi m	5.6	1	+ 7 49	23 01 29.950	+3.022	− .112	
797	33 Cephei π	5	1	+74 32	23 02 51.481	+1.875	+ .496	
798	59 Pegasi p	5 6	2	+ 7 52	23 03 42.690	+3.023	− .043	
799	60 Pegasi	6	3	+26 00	23 04 06.733	+2.910	+ .133	
800	90 Aquarii φ	5	3	− 6 53	23 06 04.957	+3.106	+ .061	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1841.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
801	6 Piscium γ	4.5	5	+ 2°25′	23 08 55.276	+3.108	+ .048	
802	93 Aquarii ψ^2	5	2	—10 03	23 09 37.930	+3.121	— .511	
802	7 Piscium b	6	1	+ 4 31	23 12 13.809	+3.046	— .377	
804	Aquarii T	6	2	—27 51	23 12 46.192	+3.215	— .493	
805	62 Pegasi τ	5	2	+22 52	23 12 46.467	+2.952	+ .162	
806	66 Pegasi	6	1	+11 27	23 15 03.471	+3.015	+ .256	
807	2793 A. S. C.	6.7	3	—22 39	23 15 40.823	+3.177	— .054	
808	99 Aquarii b^2	5	1	—21 31	23 17 40.812	+3.166	+ .116	
809	8 Piscium κ^1	5.6	2	+ 0 23	23 18 46.777	+3.067	+ .770	
810	9 Piscium κ^2	6	2	+ 0 15	23 19 06.112	+3.067	+ .235	
811	Cephei s	5.6	1	+69 29	23 20 35.132	+2.452		
812	12 Piscium w^2	7	1	— 1 55	23 21 21.067	+3.076	+ .491	
813	2807 A. S. C.	5	1	+57 40	23 22 43.687	+2.722	+1.475	
814	13 Piscium w^3	7	3	— 1 58	23 23 48.066	+3.076	+ .550	
815	101 Aquarii b^4	3.6	1	—21 48	23 24 56.549	+3.151	— .422	
816	71 Pegasi y	5	1	+21 37	23 25 30.921	+2.988	+ .383	
817	2814 A. S. C.	6.7	1	— 8 21	23 27 19.511	+3.097	— .036	
818	15 Piscium	7	1	+ 0 26	23 27 21.021	+3.067	+ .654	
819	2816 A. S. C.	6	1	—27 45	23 27 48.182	+3.169	+ .193	
820	16 Piscium	6	1	+ 1 13	23 28 16.550	+3.064	— .134	
821	17 Piscium ι	4.5	7	+ 4 46	23 31 46.410	+3.054	+ .256	+ .088
822	35 Cephei γ	3	9	+76 44	23 32 53.218	+2.400	+2.073	+ .368
823	18 Piscium λ	5	7	+ 0 54	23 33 55.989	+3.066	— .087	
824	19 Piscium m	6	3	+ 2 36	23 38 16.120	+3.062	— .012	
825	Aquarii Y	6	2	—12 47	23 39 04.312	+3.097	— .145	
826	Ap. Sculp. δ	5	2	—29 00	23 40 37.993	+3.133	+ .240	
827	79 Pegasi	6	2	+27 58	23 41 37.350	+3.010	+1.050	
828	108 Aquarii A^5	6	2	—19 48	23 43 08.107	+3.105	+ .312	
829	2853 A. S. C.	6	2	—15 08	23 44 19.502	+3.094	— .242	
830	25 Piscium	6.7	2	+ 1 12	23 44 56.133	+3.066	+ .471	
831	26 Piscium	6	6	+ 6 11	23 46 59.862	+3.060	+ .192	
832	84 Pegasi ψ	5.6	3	+24 16	23 49 40.013	+3.040	+ .043	
833	28 Piscium ω	4.5	6	+ 5 59	23 51 08.922	+3.062	+ .020	
834	2866 A. S. C.	7	1	— 6 47	23 51 31.081	+3.121	+ .110	
835	29 Piscium q	6	3	— 3 55	23 53 40.383	+3.071	+ .632	
836	30 Piscium r	4.5	1	— 6 54	23 53 48.267	+3 073	+ .344	
837	31 Piscium c^1	6.7	1	+ 8 04	23 54 15.767	+3.063	+ .374	
838	2 Ceti g	4	4	—18 13	23 55 35.870	+3.078	— .048	
839	33 Piscium s	5	4	— 6 36	23 57 11.652	+3.070	+ .132	

ASTRONOMICAL OBSERVATIONS AT WASHINGTON.

1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Jan. 17	α Andromedæ	1	+28°13′	53.9	18.5	0 00 43.2	7.7	32.3
2		γ Pegasi	2.3	+14 18	51.0	13.3	0 05 35.6	58.0	20.4
3		Moon I	(6.2)	+ 6 29	8.3	30.6	0 09 52.9	15.2	37.5
4		α Cassiopeæ	3	+55 40	46.6	25 3	0 32 03.5	42.2	20.5
5		β Ceti	2.3	—18 51	23.2	46.3	0 36 09.2	32.1	55.0
*6		b Pleiadum	4.5	+23 37	13.7	37.4	3 36 01.1	24.8	48.5
*7		η Tauri	3	+23 37	49.5	13.5	3 38 37.2	0.9	24.5
8		γ^1 Eridani	2.3	—13 57	25.6	48.1	3 51 10.5	33.0	55.4
9		β Orionis	1	— 8 23	44.1	6.0	5 07 27.9	49.7	11.6
10	18	α Andromedæ	1	+28 13	54.5	19.2	0 00 43.9	8.5	33.1
11		γ Pegasi	2.3	+14 18	51.6	14.0	0 05 36.5	58.9	21.2
12		α Cassiopeæ	3	+55 40	47.4	25.9	0 32 04.2	42.8	21.2
13		β Ceti	2.3	—18 51	24.0	46.8	0 36 09.6	32.5	55.5
14		η Cassiopeæ	4	+56 58	45.0	25.0	0 40 04.5	44.8	24.2
15		γ Cassiopeæ	3	+59 51	16.5	0.0	0 47 43.2	26.5	9.5
16		Moon I	(7.2)	+11 40	20.1	42.8	0 56 05.2	27.8	50.5
17		ψ^2 Piscium	6	+19 54	13.5	36.5	0 59 59.5	22.6	45.7
18		f Piscium	6	+ 2 47	16.2	48.0	1 10 09.6	31.2	53.0
19		l Piscium	6	+27 54	5.5	30.0	1 12 51.5	19.0	43.5
*20		158 A. S. C.	7	+ 7 08	53.3	15.0	1 20 36.8	58.5	20 5
21		η Piscium	4	+16 30	48.1	10.5	1 23 32.8	55.2	17.6
22	19	α Ursæ Min.	1.2	+88 29			1 02 53.5		
*23		ζ^1 Piscium	6	+ 6 44	16.0	37.8	1 05 59.6	21.5	43.3
24		f Piscium	6	+ 2 47	26.5	48.3	1 10 09.9	31.6	53.4
25		l Piscium	6	+27 54	5.5	30.2	1 12 54.8	19.4	43.9
26		θ^1 Ceti	3	— 9 00	54.6	16.8	1 16 38.9	1.0	22.9
*27		158 A. S. C.	7	+ 7 08	53.5	15.5	1 20 37.3	59.1	21.0
28		η Piscium	4	+16 30	48.5	11.1	1 23 33.5	56.0	18.3
29		101 Piscium	6	+13 51	6.5	29.0	1 27 51.3	13.5	36.0
*30		105 Piscium	6	+15 36	56.1	18.6	1 31 41.2	3.8	26.3
31		107 Piscium	6	+19 30	41.2	4.2	1 34 27.2	50.2	13.2
32		σ Piscium	5	+ 8 21	50.5	12.6	1 37 34.5	56.5	18.6
*33		193 A. S. C.	6.7	+21 29	10.1	33.5	1 41 56.5	20.2	43.5
34		Moon I	(8.2)	+16 31	28.6	52.0	1 45 15.1	38.2	1.3
35		β Arietis	3	+20 02			1 46 26.7	50.0	13.0
36		ι Arietis	6	+17 03	29.6	52.5	1 49 15.2	37.9	0.5
*37		υ^2 Ceti	4.5	—21 51	18.3	41.6	1 53 05.0	28.4	51.8
38		α Arietis	3	+22 43	1.2	24.8	1 58 48.1	11.7	35.3
39		15 Arietis	6	+18 45	38.3	1.3	2 02 24.3	47.3	10.2
40		ξ^1 Ceti	5	+ 8 06	25.5	47.5	2 05 09.4	31.4	53.3
41		θ^1 Arietis	6.7	+19 10	6.5	29.5	2 09 52.5	15.5	38.4
42	21	ε Arietis	5	+20 42	57.5	20.8	2 50 44.0	7.2	30.5
*43		α Ceti	2.3	+ 3 28	51.0	12.7	2 54 34.5	56.2	18.0
44		δ Arietis	4	+19 07	23.3	46.3	3 03 09.0	32.3	55.3
45		τ Fornacis	6	—28 28	57.3	32.0	3 32 46.6	11.2	35.8
46		g Pleiadum	5.6	+23 48	11.0	34.5	3 35 58.2		
47		b Pleiadum	4.5	+23 37	16.0	39.7	3 36 03.5		
48		Moon I	(10.3)	+24 13			3 36 39.8	4.5	28.9
49		η Tauri	3	+23 37		15.5	3 38 39.4	3.0	26.5
*50		426 A. S. C.	5	—38 06	24.5	51.6	3 43 19.5	47.2	14.5

January 17.—Atmosphere clear. ☽ ☌ 45 Piscium.
18.—Clear. No error of level or collimation.
19.—Adjustments as yesterday.
21.—Clear. No error of level or collimation. ☽ ☌ Pleiades.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
0	00	43.12	— .052	+0	28.91	+0	28.82	+0.76	0	00	14.25	1
0	05	35.66	— .107		28.66		.82		0	05	06.73	2
0	09	52.90	— .135				.82		0	09	23.95	3
0	32	03.62	+ .128		29.02		.83		0	31	34.92	4
0	36	09.16	— .248		28.86		.84		0	35	40.07	5
3	36	01.10	— .072				.93		3	35	32.10	*6
3	38	37.12	— .072		28.99		.93		3	38	08.12	*7
3	51	10.52	— .205		28.96		.93		3	50	41.39	8
5	07	27.86	— .165	+0	28.74	+0	28.97	+0.76	5	06	58.71	9
0	00	43.84	+ .014	+0	29.70	+0	29.64	+0.68	0	00	14.21	10
0	05	36.44	+ .030		29.61		.64		0	05	06.83	11
0	32	04.30	— .036		29.58		.65		0	31	34.61	12
0	36	09.68	+ .062	+0	29.70		.65		0	35	40.09	13
0	40	04.70	— .040				.66		0	39	35.00	14
0	47	43.14	— .050				.66		0	47	13.43	15
0	56	05.28	+ .033				.66		0	55	35.65	16
0	59	59.56	+ .025				.66		0	59	29.92	17
1	10	09.60	+ .041				.67		1	09	39.97	18
1	12	54.50	+ .015				.67		1	12	24.84	19
1	20	36.82	+ .037				.67		1	20	07.19	*20
1	23	32.84	+ .028			+0	29.68	+0.68	1	23	03.19	21
1	02	53.50	+4.281	+0	28.55	+0	30.23	+0.47	1	02	27.55	22
1	05	59.64	— .037				.23		1	05	29.37	*23
1	10	09.94	— .041				.23		1	09	39.67	24
1	12	54.76	— .015				.23		1	12	24.52	25
1	16	38.82	— .052		30.17		.23		1	16	08.54	26
1	20	37.28	— .037				.23		1	20	07.01	*27
1	23	33.48	— .028				.23		1	23	03.22	28
1	27	51.26	— .031				.23		1	27	21.00	29
1	31	41.20	— .029				.23		1	31	10.94	*30
1	34	27.20	— .025				.24		1	33	56.94	31
1	37	34.54	— .036				.24		1	37	04.26	32
1	41	56.76	— .022				.24		1	41	26.50	*33
1	45	15.04	— .028				.24		1	44	44.77	34
1	46	26.78	— .023				.24		1	45	56.52	35
1	49	15.14	— .027				.24		1	48	44.87	36
1	53	05.02	— .065				.24		1	52	34.72	*37
1	58	48.22	— .021	+0	30.32		.24		1	58	17.96	38
2	02	24.28	— .025				.24		2	01	54.02	39
2	05	09.42	— .036				.25		2	04	39.13	40
2	09	52.48	— .025			+0	30.25	+0.47	2	09	22.21	41
2	50	44.00	— .167			+0	30.90	+0.33	2	50	12.93	42
2	54	34.48	— .292	+0	31.12		.90		2	54	03.29	*43
3	03	09.24	— .179				.90		3	02	38.16	44
3	32	46.58	— .526				.91		3	32	15.14	45
3	35	58.27	— .142				.91		3	35	27.22	46
3	36	03.43	— .144				.91		3	35	32.38	47
3	36	39.80	— .139				.91		3	36	08.75	48
3	38	39.25	— .145	+0	31.05		.91		3	38	08.20	49
3	43	19.46	— .619			+0	30.91	+0.33	3	42	47.93	*50

No. 6. Three stars in the field of the instrument.
7. Five stars in the field.
20, 23, 27, 30, 37, 43. Two stars in the field.
33. 193 A. S. C. double; the smaller star of the 7th magnitude.
50. 426 A. S. C. double; the smaller star of the 6th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
*1	Jan. 21	426 A. S. C.	5	—38°06′	24.5	51.6	3 43 19.5	47.2	14.5
*2	cont'd.	32 Eridani	5	— 3 26	11.2	33.3	3 46 55.5	16.5	38.3
*3		ζ Ursæ Min.	4	+78 16			3 50 20.3		
*4		A¹ Tauri	5	+21 39	8.0	31.2	3 55 54.5	17.9	41.3
5		α Tauri	1	+16 11	39.3	2.1	4 27 24.6	47.2	9.7
*6	22	426 A. S. C.	5	—38 06	24.5	51.8	3 43 19.4	47.2	13.8
*7		32 Eridani	5	— 3 26	11.5	33.4	3 46 55.2	17.0	38.6
8		ζ Ursæ Min.	4	+78 16			3 50 20.3		
*9		A¹ Tauri	5	+21 39	8.5	32.0	3 55 55.3	18.6	42.0
10		A Eridani	6.7	—28 05	51.2	15.8	3 59 40.3	4.8	29.5
11		463 A. S. C.	7	+22 00	16.5	40.0	4 04 03.3	26.6	50.3
12		39 Eridani	5	—10 39	42.0	4.3	4 07 26.4	48.5	10.6
*13		φ Tauri	6	+26 58	23.7	48.2	4 11 12.5	36.9	1.4
*14		63 Tauri	6	+16 24	9.9	32.5	4 14 55.0	17.6	40.3
15		43 Eridani	4.5	—34 23	47.5	13.8	4 18 39.9	6.2	32.6
*16		η Draconis	3	+61 52			4 22 23.1		
17		α Tauri	1	+16 11	39.5	2.5	4 27 25.0	47.6	10.5
*18		σ² Tauri	5.6	+15 36	2.8	25.5	4 30 48.0	10.5	33.2
19		54 Eridani	4	—19 58	19.5	42.6	4 34 05.6	28.7	51.7
20		Moon I	(11.4)	+25 57	53.2	18.0	4 39 42.9	7.8	32.6
21		60 Eridani	6.7	—16 29	53.0	15.5	4 43 38.5	0.6	23.5
*22		σ² Orionis	5	+13 16	18.7	41.0	4 48 03.3	25.6	48.0
*23		s Orionis	5.6	+ 1 28	12.1	33.8	4 50 55.5	17.2	39.0
24		ι Tauri	5.6	+21 22	26.6	50.2	4 54 13.4	36.6	0.0
25		*m* Tauri	5.6	+18 26	55.0	18.0	4 58 40.8	3.6	26.5
*26		ε Ursæ Min.	4	+82 16			5 02 48.0		
*27		β Orionis	1	— 8 23	46.5	8.5	5 07 30.5	52.5	14.5
28		τ Orionis	4	— 7 01	46.1	8.0	5 10 29.9	51.8	13.7
29		λ Leporis	4.5	—13 20	7.0	29.2	5 12 51.5	13.9	36.2
30		β Tauri	2	+28 28	3.2	28.0	5 16 52.7	17.3	42.0
*31		δ Orionis	2	— 0 25	46.3	8.3	5 24 30.1	51.8	13.5
32		ε Orionis	2.3	— 1 18	2.3	24.0	5 28 45.7	7.4	29.2
33		α Columbæ	2	—34 10	37.5	3.6	5 34 29.8	56.2	22.5
34	23	ι Tauri	5.6	+21 22	27.0	50.5	4 54 13.7	37.0	0.3
35		*m* Tauri	5	+18 26	55.3	18.3	4 58 41.2	4.1	27.0
*36		ε Ursæ Min.	4	+82 16			5 02 48.5		
37		β Orionis	1	— 8 23	47.0	9.0	5 07 31.0	52.9	14.9
38		λ Leporis	4.5	—13 20	7.5	29.9	5 12 52.0	14.3	36.6
39		β Tauri	2	+28 28	3.5	28.3	5 16 53.0	17.7	42.4
40		658 A. S. C.	7	—12 02	33.2	55.3	5 20 17.4	39.6	1.8
*41		δ Orionis	2	— 0 25	47.0	8.8	5 24 30.5	52.3	14.0
42		α Leporis	3.4	—17 56	34.6	57.3	5 26 20.0	42.7	5.5
43		125 Tauri	6	+25 48	43.2	7.2	5 30 31.2	55.3	19.5
44		α Columbæ	2	—34 10	37.7	4.0	5 34 30.3	56.5	22.6
45		C Tauri	5.6	+27 34	9.5	34.1	5 43 58.6	23.2	47.6
46		Moon I	(12.4)	+26 13	34.0	59.0	5 46 24.0	49.0	13.9
47		139 Tauri	5.6	+25 56	58.0	22.1	5 48 46.0	10.2	34.5
48		H Geminorum	5	+23 16	18.5	42.2	5 55 05.8	29.5	53.2
49		ρ Leporis	5.6	—16 28	45.3	8.0	5 58 30.5	53.2	16.0
50		α Lyncis	5	+61 33	25.3	11.5	6 03 57.0	42.5	28.0
51		*b* Lyncis	4.5	+59 03			6 06 17.0	59.2	41.5

January 22.—Adjustments as yesterday.

23.—Clear. 139 Tauri was occulted a few seconds after passing out of the field of the transit.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
3	43	19.46	— .619			+0	30.91	+0.33	3	42	47.93	*1
3	46	54.94	— .338				.91		3	46	23.69	*2
3	50	20.30	—2.189	+0	30.88		.91		15	49	47.20	*3
3	55	54.58	— .159				.91		3	55	23.51	*4
4	27	24.58	— .201	+0	30.60	+0	30.92	+0.33	4	26	53.46	5
3	43	19.34	— .619			+0	31.28	+0.43	3	42	47.44	*6
3	46	55.14	— .338				.28		3	46	23.52	*7
3	50	20.30	—2.189	+0	31.05		.28		15	49	46.83	8
3	55	55.28	— .159				.28		3	55	23.84	*9
3	59	40.32	— .522				.28		3	59	08.52	10
4	04	03.34	— .157				.28		4	03	31.90	11
4	07	26.36	— .387				.28		4	06	54.69	12
4	11	12.54	— .116				.28		4	10	41.14	*13
4	14	55.06	— .199				.28		4	14	23.58	*14
4	18	40.00	— .580				.28		4	18	08.14	15
4	22	23.10	—1.042		31.43		.29		16	21	50.77	*16
4	27	25.02	— .201		31.05		.29		4	26	53.53	17
4	30	48.00	— .206				.29		4	30	16.50	*18
4	34	05.62	— .456				.29		4	33	33.87	19
4	39	42.90	— .124				.29		4	39	11.49	20
4	43	38.22	— .429				.29		4	43	06.50	21
4	48	03.32	— .222				.29		4	47	31.81	*22
4	50	55.52	— .304				.29		4	50	23.93	*23
4	54	13.36	— .161				.29		4	53	41.91	24
4	58	40.78	— .184				.30		4	58	09.30	25
5	02	48.00	—3.188		31.49		.30		17	02	13.51	*26
5	07	30.50	— .371		31.22		.30		5	06	58.83	*27
5	10	29.90	— .361				.30		5	09	58.24	28
5	12	51.56	— .406				.30		5	12	19.85	29
5	16	52.64	— .102		31.51		.30		5	16	21.24	30
5	24	30.00	— .317		31.28		.30		5	23	58.38	*31
5	28	45.72	— .323		31.28		.30		5	28	14.10	32
5	34	29.92	— .578	+0	31.37	+0	31.31	+0.43	5	33	58.03	33
4	54	13.70	— .133			+0	31.83	+0.48	4	53	41.74	34
4	58	41.18	— .151				.83		4	58	09.20	35
5	02	48.50	—2.614	+0	32.46		.84		17	02	14.05	*36
5	07	30.96	— .304		31.76		.85		5	06	58.81	37
5	12	52.06	— .333				.85		5	12	19.88	38
5	16	52.98	— .084		31.87		.85		5	16	21.05	39
5	20	17.46	— .325				.85		5	19	45.29	40
5	24	30.52	— .260		31.87		.85		5	23	58.41	*41
5	26	20.02	— .361		31.74		.85		5	25	47.81	42
5	30	31.28	— .103				.85		5	29	59.33	43
5	34	30.22	— .474	+0	31.89		.85		5	33	57.90	44
5	43	58.60	— .091				.85		5	43	26.66	45
5	46	23.98	— .100				.85		5	45	52.03	46
5	48	46.16	— .102				.85		5	48	14.21	47
5	55	05.84	— .120				.85		5	54	33.87	48
5	58	30.60	— .351				.86		5	57	58.39	49
6	03	56.86	+ .331				.86		6	03	25.33	50
6	06	17.01	+ .275			+0	31.86	+0.48	6	05	45.42	51

Nos. 1, 6. 426 A. S. C. double; the smaller star of the 6th magnitude.
2, 7. 32 Eridani double; the smaller star of the 6.7 magnitude.
3, 8, 16, 26, 36. Sub-polo.
4, 9, 13, 14, 16, 18, 22, 23, 27, 31, 41. Two stars in the field of the instrument.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	Jan. 23 cont'd.	11 Geminorum	8	+23°31′	29.2	53.2	6 10 16.8	40.5	4.2
2		μ Geminorum	3	+22 35	11.7	35.3	6 13 58.8	22.3	45.8
3		16 Geminorum	7	+20 35	21.0	44.3	6 19 07.5	30.8	54.0
*4		δ Ursæ Min.	3	+86 35			6 23 25.0		
5		51 (Hev.) Cephei	5.6	+87 16			6 25 30.0		
*6	24	δ Ursæ Min.	3	+86 35			6 23 37.2		
7		51 (Hev.) Cephei	5.6	+87 16			6 25 14.5		
8		54 Aurigæ	6	+28 24	20.0	44.8	6 30 09.5	34.3	59.0
9		28 Geminorum	6	+29 07	29.0	54.0	6 35 18.8	43.7	8.5
*10		α Canis Maj.	1	−16 30	0.0	22.8	6 38 45.0	8.0	30.8
11		Arg. in pup.	5	−37 46	41.4	9.2	6 42 37.0	4.8	32.6
*12		e^1 Geminorum	5.6	+13 22	33.5	56.0	6 46 18.3	40.5	2.8
13		y^1 Geminorum	6.7	+26 17	49.0	13.3	6 49 37.5	1.8	25.9
14		ω^1 Geminorum	6	+24 26	33.8	57.8	6 53 21.6	45.5	9.3
15		Moon I	(13.5)	+24 27	27.2	51.8	6 54 16.4	41.0	5.6
*16		τ Geminorum	5	+30 30	48.8	14.0	7 01 39.3	4.6	29.7
17		51 Geminorum	5	+16 25	7.0	29.6	7 04 52.2	14.8	37.5
*18		δ Geminorum	3.4	+22 16	28.5	52.1	7 11 15.6	39.0	2.5
19		59 Geminorum	6.7	+27 56	28.5	53.2	7 15 18.0	42.5	7.1
*20		η Canis Maj.	3	−29 00	35.3	0.0	7 18 25.0	49.8	14.7
21		924 A. S. C.	7	−28 50	27.5	52.3	7 22 17.2	42.1	7.0
22		δ^2 Canis Min.	6	+ 3 37	45.5	7.2	7 25 29.0	50.9	12.5
*23		α Canis Min.	1.2	+ 5 38	52.2	14.2	7 31 35.9	57.9	19.7
*24		κ Geminorum	4	+24 46	41.0	5.0	7 35 28.9	52.8	16.7
*25	26	1086 A. S. C.	7	+17 58	7.6	30.5	8 44 53.3	16.2	39.0
*26		σ^1 Cancri	6	+15 55	16.5	39.3	8 49 01.9	24.3	47.0
27		ν Cancri	6	+25 04	17.8	41.8	8 54 05.6	29.5	53.5
28		ω Hydræ	6	+ 5 43	31.5	53.2	8 58 14.9	36.7	58.5
*29		1112 A. S. C.	5.6	−25 13	55.0	19.0	9 01 42.9	7.0	31.0
30		Moon II	(15.5)	+15 22	31.0	54.2	9 06 17.3	40.3	3.4
31		24 Hydræ	6	− 8 05	49.0	11.0	9 09 33.0	54.9	16.8
*32		27 Hydræ	5.6	− 8 53	38.0	0.2	9 13 22.0	44.0	6.0
33		λ Pixid. Naut.	5.6	−28 09	8.6	33.5	9 16 58.2	22.8	47.5
34		α Hydræ	2	− 7 59	41.5	3.5	9 20 25.4	47.4	9.3
35		ξ Leonis	5.6	+12 00	17.2	39.5	9 24 01.7	23.9	46.1
36		7 Leonis	7	+15 05	5.5	28.1	9 27 50.5	13.0	35.5
37		ο Leonis	4	+10 36	34.5	56.8	9 33 18.9	40.9	3.1
38		ε Leonis	3	+24 30	40.9	4.9	9 37 28.8	52.7	16.4
39	27	24 Hydræ	6	− 8 05	49.5	11.4	9 09 33.3	55.3	17.3
*40		27 Hydræ	5.6	− 8 53	38.5	0.5	9 13 22.5	44.5	6.5
41		λ Pixid. Naut.	5.6	−28 09	9.2	33.9	9 16 58.5	23.2	47.8
42		α Hydræ	2	− 7 59	42.0	4.0	9 20 25.9	47.9	9.7
43		ξ Leonis	6	+12 00	17.8	39.9	9 24 02.0	24.2	46.5
*44		β Cephei	3	+69 53		4.1	9 27 07.0	10.1	13.3
45		ο Leonis	4	+10 36	35.0	57.0	9 33 19.1	41.3	3.4
46		ε Leonis	3	+24 30	41.2	5.0	9 37 28.8	52.6	16.5
47		υ Ursæ Maj.	4.5	+59 47		36.5	9 40 19.7	3.0	46.2
48		t Sextantis	7	− 3 30	9.0	30.8	9 43 52.5	14.3	36.0
*49		9 Sextantis	7	+ 5 42	43.5	5.3	9 46 27.1	49.0	10.7
50		ν Leonis	5.6	+13 12	35.0	57.2	9 50 19.5	41.7	4.1

January 24.—Cirrus. The error of collimation was ascertained before and after observing to be +0s.68.
☽ ☌ ω^1 Geminorum.

26.—Adjusted the collimation; no error of level.

27.—Clear. Adjustments accurately as yesterday.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
6	10	16.78	— .118			+0	31.86	+0.48	6	09	44.80	*1
6	13	58.78	— .124	+0	31.95		.86		6	13	26.80	2
6	19	07.52	— .138				.86		6	18	35.52	3
6	23	25.00	—5.587		29.22		.87		18	22	47.54	*4
6	25	30.00	+6.415	+0	32.09	+0	31.87	+0.48	6	25	04.54	5
6	23	37.20	—17.050	+0	29.84	+0	32.29	+0.40	18	22	47.86	*6
6	25	14.50	+20.723		31.06		.29		6	25	02.93	7
6	30	09.52	+ .698				.29		6	29	37.93	8
6	35	18.80	+ .412				.29		6	34	46.92	9
6	38	45.32	+ .360		32.20		.30		6	38	13.38	*10
6	42	37.00	+ .516				.30		6	42	05.22	11
6	46	18.22	+ .656				.30		6	45	46.58	*12
6	49	37.50	+ .646				.30		6	49	05.85	13
6	53	21.60	+ .646				.30		6	52	49.95	14
6	54	16.40	+ .545				.30		6	53	44.64	15
7	01	39.38	+ .720				.30		7	01	07.80	*16
7	04	52.22	+ .607				.30		7	04	20.53	17
7	11	15.54	+ .607		32.35		.30		7	10	43.85	*18
7	15	17.86	+ .681				.30		7	14	46.24	19
7	18	24.96	+ .340				.30		7	17	53.00	*20
7	22	17.22	+ .341				.30		7	21	45.26	21
7	25	29.02	+ .443				.30		7	24	57.16	22
7	31	35.98	+ .456	+0	32.26		.30		7	31	04.14	*23
7	35	28.88	+ .639			+0	32.30	+0.40	7	34	57.22	*24
8	44	53.32	— .229			+0	33.11	+0.38	8	44	19.98	*25
8	49	01.80	— .248				.11		8	48	28.44	*26
8	54	05.64	— .161				.11		8	53	32.37	27
8	58	14.96	— .335				.11		8	57	41.52	28
9	01	42.98	— .607				.12		9	01	09.25	*29
9	06	17.24	— .254				.12		9	05	43.87	30
9	09	32.94	— .450				.12		9	08	59.37	31
9	13	22.04	— .457				.12		9	12	48.46	*32
9	16	58.12	— .637				.12		9	16	24.36	33
9	20	25.42	— .449	+0	33.11		.12		9	19	51.85	34
9	24	01.68	— .281				.12		9	23	28.28	35
9	27	50.52	— .255				.12		9	27	17.15	36
9	33	18.84	— .295				.12		9	32	45.43	37
9	37	28.74	— .166	+0	33.39	+0	33.12	+0.38	9	36	55.45	38
9	09	33.36	— .450			+0	33.48	+0.38	9	08	59.43	39
9	13	22.50	— .457				.49		9	12	48.55	*40
9	16	58.52	— .637				.49		9	16	24.39	41
9	20	25.90	— .449	+0	33.57		.49		9	19	51.96	42
9	24	02.08	— .281				.49		9	23	28.31	43
9	27	07.04	—1.772		33.48		.49		21	26	31.78	*44
9	33	19.16	— .295				.49		9	32	45.38	45
9	37	28.82	— .166	+0	33.45		.49		9	36	55.16	46
9	40	19.63	+ .432				.49		9	39	46.57	47
9	43	52.52	— .292				.49		9	43	18.74	48
9	46	27.12	— .335				.49		9	45	53.29	*49
9	50	19.50	— .271			+0	33.49	+0.38	9	49	45.74	50

No. 1. Three stars in the field of the instrument.
4, 6, 44. Sub-polo.
10, 16, 18, 20, 23, 24, 25, 26, 29, 32, 40, 49. Two stars in the field.
12. ϵ^1 Geminorum double; the smaller star of the 8th magnitude.
44. β Cephei double; the smaller star of the 7-8 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Jan. 27	1198 A. S. C.	6 7	+22°43′	49.2	12.6	9 54 36.1	59.6	23.2
2	cont'd.	1202 A. S. C.	7	+16 32	57.2	19.9	9 57 42.5	5.1	27 9
*3		α Leonis	1	+12 44	49.0	11.2	10 00 33.5	55.7	18.0
4		Moon II	(16.6)	+12 18	58.2	20.8	10 05 43.4	5.9	28.3
5		37 Leonis	6	+14 31	2.9	25.5	10 08 47.8	10.2	32.6
6		γ Leonis	2	+20 38	5.2	28.4	10 11 51.5	14.7	38.1
7		z Leonis	7	+ 7 21	36.5	58.5	10 15 20.4	42.3	4.2
8		μ Hydræ	4	−16 02	18.2	40.5	10 19 03.2	25.9	48.5
9		k Sextantis	6	− 1 56	20.0	41.7	10 22 03.5	25.2	47.0
10		ρ Leonis	4	+10 07	21.5	43.5	10 25 05.5	27.5	49.6
11	31	θ Virginis	4.5	− 4 42	40.0	2.0	13 02 23.8	45.5	7.5
12		55 Virginis	6	−19 06	35.6	58.5	13 06 21.5	44.6	7.7
13		58 Virginis	7.8	− 9 42	4.0	26.1	13 09 48.0	10.0	32.2
14		62 Virginis	7	−10 28	55.7	17.8	13 12 39.9	2.0	24.2
15		α Virginis	1	−10 20	45.8	8.0	13 17 30.1	52.2	14.2
16		w Virginis	6	+14 38	34.5	57.0	13 21 19.5	42.0	4.5
17		75 Virginis	6	−14 32	18.0	40.5	13 25 03.0	25.5	48.0
*18		f Hydræ con.	6	−26 41	53.5	16.8	13 28 40.8	4.8	28.8
*19		1 Bootis	6	+20 46	58.5	21.5	13 33 45.0	8.3	31.5
20		85 Virginis	6	−14 58	57.5	20.2	13 37 42.5	5.0	27.5
21		x Virginis	5.6	−17 21	9.6	32.2	13 41 55.0	18.0	40.8
22		Moon II	(20.7)	−16 16	36.2	59.5	13 44 22.8	46.0	9.3
23		η Bootis	3	+19 11	0.8	24.0	13 47 46.8	9.7	31.0
24		S^2 Hydræ con.	6	−24 14	59.5	23.5	13 51 47.5	11.2	35.0
25		11 Bootis	6.7	+28 09	48.5	13.2	13 54 37.8	2.5	27.2
26		θ Centauri	3	−35 35	8.2	35.0	13 58 01.8	28.5	55.1
27		1610 A. S. C.	5.6	−15 33	5.5	27.8	14 02 50.3	13.2	35.5
28		κ Virginis	4	− 9 32	21.5	43.5	14 05 05.5	27.5	49.6
29		α Bootis	1	+20 00	18.4	41.5	14 09 04.5	27.6	50.7
30		λ Virginis	4	−12 38	26.8	49.0	14 11 11.3	33.5	55.8
31	Feb. 1	85 Virginis	6	−14 58	58.0	20.5	13 37 42.9	5.5	28.0
32		x Virginis	5.6	−17 21	10.0	32.8	13 41 55.5	18.2	41.0
33		h Centauri	5	−31 08	55.0	20.5	13 44 45.7	10.9	36.5
34		η Bootis	3	+19 11	1.0	24.5	13 47 47.2	10.0	33.3
35		S^2 Hydræ con.	6	−24 14	0.0	23.9	13 51 47.6	11.5	35.5
36		11 Bootis	6.7	+28 09	48.8	13 5	13 54 38.2	2.8	27.4
37		θ Centauri	3	−35 35	8.5	35.4	13 58 02.2	28.9	55.5
38		1610 A. S. C.	5.6	−15 33	5.7	28.4	14 02 51.0	13.6	35.9
39		κ Virginis	4	− 9 32	22.0	44.2	14 05 06.1	28.1	50.2
40		α Bootis	1	+20 00	18.5	41.8	14 09 04.9	28.0	51.1
41		λ Virginis	4	−12 38	27.0	49.3	14 11 11.5	33.7	56.0
*42		7 Hydræ con.	6	−27 01	49.2	13.5	14 14 37.8	2.2	26.6
43		8 Hydræ con.	5.6	−28 46	44.1	9.0	14 19 33.8	58.5	23 2
44		1651 A. S. C.	6.7	−11 37	28.8	51.2	14 29 13.3	35.5	57.6
*45		π Bootis	5	+17 06	10.0	32.6	14 33 55.4	18.1	41.0
46		Moon II	(21.8)	−20 53	35.5	59.5	14 39 23.3	47.1	11.0
*47		α^2 Libræ	3	−15 23	1.2	23.5	14 42 46.1	8.5	31.2
48		12 Libræ	6	−23 59	0.1	24.0	14 45 47.8	11.6	35.4
49		14 Libræ	8	−24 48	7.5	31.5	14 48 55.5	19.5	43.5
50		β Ursæ Min.	3	+74 48			14 51 49.5		
51		20 Libræ	3.4	−24 39	39.6	3.5	14 55 27.5	51.4	15.3

January 31.—Clear.
February 1.—Cirrus. The collimation and level were examined; no errors.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
9	54	36.14	— .184			+0	33.49	+0.38	9	54	02.47	1
9	57	42.50	— .242				.49		9	57	08.77	2
10	00	33.48	— .375	+0	33.46		.49		9	59	59.71	*3
10	05	43.32	— .279				.49		10	05	09.55	4
10	08	47.80	— .260				.49		10	08	14.05	5
10	11	51.58	— .204				.49		10	11	17.89	6
10	15	20.38	— .322				.50		10	14	46.56	7
10	19	03.26	— .519				.50		10	18	29.24	8
10	22	03.48	— .399				.50		10	21	29.58	9
10	25	05.52	— .308			+0	33.50	+0.38	10	24	31.71	10
13	02	23.76				+0	35.65	+0.38	13	01	48.11	11
13	06	21.56					.65		13	05	45.93	12
13	09	48.06					.66		13	09	12.40	13
13	12	39.92					.66		13	12	04.26	14
13	17	30.06		+0	35.72		.66		13	16	54.40	15
13	21	19.50					.66		13	20	43.84	16
13	25	03.00					.66		13	24	27.34	17
13	28	40.74					.66		13	28	05.08	*18
13	33	45.06					.66		13	33	09.40	*19
13	37	42.56					.66		13	37	06.90	20
13	41	55.12					.66		13	41	19.46	21
13	44	22.76					.66		13	43	47.10	22
13	47	46.86			35.56		.66		13	47	11.20	23
13	51	47.34					.66		13	51	11.68	24
13	54	37.84					.66		13	54	02.18	25
13	58	01.72					.66		13	57	26.06	26
14	02	50.46					.66		14	02	14.80	27
14	05	05.52					.66		14	04	29.86	28
14	09	04.54		+0	35.69		.66		14	08	28.88	29
14	11	11.28				+0	35.67	+0.38	14	10	35.61	30
13	37	42.98				+0	35.91	+0.30	13	37	07.07	31
13	41	55.50					.91		13	41	19.59	32
13	44	45.72					.91		13	44	09.81	33
13	47	47.20		+0	35.87		.91		13	47	11.29	34
13	51	47.70					.91		13	51	11.79	35
13	54	38.14					.91		13	54	02.23	36
13	58	02.10					.91		13	57	26.19	37
14	02	50.92					.91		14	02	15.01	38
14	05	06.12					.91		14	04	30.21	39
14	09	04.86			35.98		.91		14	08	28.95	40
14	11	11.50					.91		14	10	35.59	41
14	14	37.86					.91		14	14	01.95	*42
14	19	33.72					.91		14	18	57.81	43
14	29	13.28					.91		14	28	37.37	44
14	33	55.42					.91		14	33	19.51	*45
14	39	23.28					.91		14	38	47.37	46
14	42	46.10			35.89		.91		14	42	10.19	*47
14	45	47.78					.91		14	45	11.87	48
14	48	55.50					.91		14	48	19.59	49
14	51	49.50		+0	34.58		.91		14	51	13.59	50
14	55	27.46				+0	35.91	+0.30	14	54	51.55	51

Nos. 3, 19, 42, 47. Two stars in the field of the instrument.
18. *f* Hydræ con. double; the smaller star of the 7.8 magnitude.
45. π Bootis double; the smaller star of the 6.7 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Feb. 17	α Ceti	2.3	+ 3°28′	1.9	23.5	2 54 45.2	6.9	28.6
2		δ Arietis	4	+19 07	34.0	57.2	3 03 20.0	43.0	6.0
3		Moon I	(7.4)	+22 59	52.1	16.1	3 13 40.1	4.2	28.3
4		ξ Tauri	4	+ 9 11	36.5	58.5	3 19 20.5	42.5	4.5
5		f Tauri	5.6	+12 23	8.7	31.0	3 22 53.3	15 5	37.8
6		11 Tauri	6	+24 49	16.8	41.0	3 32 04.5	28.5	52.5
7		b Pleiadum	4.5	+23 37	26.6	50.5	3 36 14.3	38.0	1.6
8		η Tauri	3	+23 37	2.6	26.5	3 38 50.2	13.9	37.5
9		m^2 Eridani	5	—24 22	48.5	12.2	3 41 36.0	59.8	23.6
10		ζ Persei	3.4	+31 25	6.0	31.5	3 44 57.0	22.4	47.8
11		l Eridani	5.6	—25 05	55.5	19.5	3 47 43.4	7.5	31.5
*12		ζ Ursæ Min.	4	+78 16			3 50 36.3		
13	18	ψ Tauri	5.6	+28 34		35.0	3 58 00.0	24.7	49.5
14		P Tauri	5.6	+26 03	9.5	33.8	4 01	22.1	46.5
15		Moon I	(8.5)	+25 26			4 12 43.0	7.8	32.6
16	19	v^1 Tauri	5	+22 27	49.5	13.0	4 17 36.3	59 7	23 2
*17		η Draconis	3	+61 52	5.3	51.5	4 22 37.3	23.0	9.5
18		α Tauri	1	+16 11	51.0	13.6	4 27 36.3	58.8	21.5
19		c Eridani	6	— 2 47	40.6	2.3	4 30 24.0	45.7	7.5
*20		τ Tauri	5	+22 39	43.8	7.5	4 33 31.1	54.6	18.0
21		β Cœli Sculp.	5	—37 27	19.0	46.2	4 37 13.5	41.0	8.3
*22		K Tauri	6	+15 38	42.0	4.6	4 41 27.3	49.7	12.5
23		b Camelop.	5	+53 30	10.5	47.1	4 45 23.5	0.0	36.5
24		b Eridani	6	— 5 25	39.1	0.7	4 49 22.5	44.3	6.1
*25		63 Eridani	5	—10 30	22.7	44.7	4 53 06.8	29.0	51.0
26		1 Leporis	6	—23 01	2.8	26.5	4 56 50.0	13.5	37.3
27		i Orionis	6	+ 8 17	18.2	40.1	5 00 02.2	24.0	46.1
*28		ε Ursæ Min.	4	+82 17			5 03 06.5		
*29		β Orionis	1	— 8 23	58.0	20.0	5 07 42.0	4.0	26.0
30		626 A. S. C.	6	—13 41	25.5	47.6	5 11 10.0	32.5	54.7
31		Moon I	(9.5)	+26 25	44.6	9.6	5 15 34.5	59.6	24.5
32		β Tauri	2	+28 28			5 17 03.6	28.5	53.4
*33		β Leporis	4.5	—20 53	27.3	50.5	5 22 13.7	37.0	0.3
34		α Leporis	3.4	—17 56	45.5	8.3	5 26 31.1	54.0	16.8
35		125 Tauri	6	+25 48	51.1	18.1	5 30 42.2	6.3	39 5
36		α Columbæ	2	—34 10	48.6	14.8	5 34 41.1	7.4	33.7
37		129 Tauri	6.7	+15 46	40.7	3.5	5 38 25.8	48 3	11.0
*38		κ Orionis	3	— 9 44	17.3	39.2	5 41 01.1	23.0	45.0
39		C Tauri	5.6	+27 34	20.5	45.0	5 44 09.5	34.0	58.5
40		α Orionis	1	+ 7 22	38.8	0.7	5 47 22.6	44.5	6.4
41	20	β Tauri	2	+28 28	14.3	39 1	5 17 03.8	28.5	53.2
*42		β Leporis	4.5	—20 53	27.6	51.0	5 22 14.2	37.5	0.5
43		α Leporis	3.4	—17 56	45.5	8.5	5 26 31.3	54.2	17.0
44		125 Tauri	6	+25 48	54.2	18.5	5 30 42.5	6.5	30.5
45		α Columbæ	2	—34 10	49.0	15.3	5 34 41.5	7.8	34.0
46		129 Tauri	6.7	+15 46	41.0	3.5	5 38 26.0	48.5	11.0
*47		κ Orionis	3	— 9 44	17.5	39.4	5 41 01.3	23.8	45.3
48		C Tauri	5.6	+27 34	20.5	45.0	5 44 09.5	34.0	58.5
49		α Orionis	1	+ 7 22	38.8	0.8	5 47 22.7	44.6	6.5
*50		59 Orionis	6	+ 1 49	14.5	36.0	5 50 57.8	19.5	41.0

February 17.—The adjustments were examined; no errors of collimation or level.
18.—Cumulo-stratus.
19.—No error of collimation or level. Clear. ☽ ☌ 125 Tauri.
20.—Perfectly clear.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
2	54	45.22	— .053	+0	42.47	+0	42.48	+0.10	2	54	02.69	1
3	03	20.04	— .033				.48		3	02	37.53	2
3	13	40.16	— .027				.48		3	12	57.65	3
3	19	20.50	— .046				.48		3	18	37.97	4
3	22	53.26	— .041				.48		3	22	10.74	5
3	32	04.66	— .024				.48		3	31	22.16	6
3	36	14.20	— .024				.48		3	35	31.70	7
3	38	50.14	— .024		42.43		.48		3	38	07.64	8
3	41	36.02	— .090				.48		3	40	53.45	9
3	44	56.94	— .014				.48		3	44	14.45	10
3	47	43.48	— .090				.48		3	47	00.91	11
3	50	36.30	— .400	+0	45.79	+0	42.48	+0.10	15	49	53.42	*12
3	57	59.88	— .204			+0	42.56	+0.08	3	57	17.12	13
4	01	57.95	— .247				.56		4	01	15.14	14
4	12	43.00	— .257			+0	42.56	+0.08	4	12	00.18	15
4	17	36.34	— .305			+0	42.64	+0.15	4	16	53.39	16
4	22	37.32	—2.084	+0	43.22		.64		16	21	52.60	*17
4	27	36.24	— .402		42.43		.64		4	26	53.20	18
4	30	24.02	— .666				.64		4	29	40.71	19
4	33	31.00	— .302				.64		4	32	48.06	*20
4	37	13.60	—1.224				.64		4	36	29.74	21
4	41	27.22	— .410				.64		4	40	44.17	*22
4	45	23.52	+ .424				.64		4	44	41.30	23
4	49	22.54	— .702				.64		4	48	39.20	24
4	53	06.84	— .772				.64		4	52	23.43	*25
4	56	50.02	— .958				.64		4	56	06.42	26
5	00	02.12	— .515				.64		4	59	18.96	27
5	03	06.50	—6.376		42.94		.64		17	02	17.48	*28
5	07	42.00	— .742		42.70		.64		5	06	58.62	*29
5	11	10.06	— .817				.64		5	10	26.60	30
5	15	34.56	— .240				.64		5	14	51.68	31
5	17	03.80	— .205		42.79		.64		5	16	20.96	32
5	22	13.76	— .925				.64		5	21	30.19	*33
5	26	31.14	— .880		42.69		.64		5	25	47.62	34
5	30	42.24	— .251				.64		5	29	59.35	35
5	34	41.12	—1.157		42.45		.64		5	33	57.32	36
5	38	25.86	— .409				.64		5	37	42.81	37
5	41	01.12	— .761				.64		5	40	17.72	*38
5	44	09.50	— .222				.64		5	43	26.64	39
5	47	22.60	— .527	+0	42.80	+0	42.64	+0.15	5	46	39.43	40
5	17	03.80	— .202	+0	42.90	+0	42.85	+0.24	5	16	20.75	41
5	22	14.16	— .896				.85		5	21	30.41	*42
5	26	31.30	— .863		42.88		.85		5	25	47 59	43
5	30	42.44	— .233				.85		5	29	59.36	44
5	34	41.52	—1.121		42.91		.85		5	33	57.55	45
5	38	26.00	— .386				.85		5	37	42.76	46
5	41	01.36	— .738				.85		5	40	17.77	*47
5	44	09.50	— .215				.85		5	43	26.43	48
5	47	22.68	— .511	+0	42.91		.85		5	46	39.32	49
5	50	57.76	— .586			+0	42.85	+0.24	5	50	14.32	*50

Nos. 12, 17, 28. Sub polo.
17, 20, 22. 25, 29, 38, 47, 50. Two stars in the field of the transit.
33, 42. β Leporis double; stars equal.
50. 59 Orionis double; smaller star of the 7.8 magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	*s.*	*h. m. s.*	*s.*	*s.*
1	Feb. 20 cont'd.	χ^8 Orionis	5	+20°08′	31.6	54.6	5 55 17.8	41.0	4.2
2		5 Geminorum	7	+24 27	49.0	12.8	6 02 36.5	0.3	24.2
3		η Geminorum	4.5	+22 33	19.0	42.6	6 06 06.1	29.6	53.1
4		*l* Orionis	6	+10 00			6 09 09.5	31.8	53.3
5		μ Geminorum	3	+22 35	22.5	46.3	6 14 09.8	33.2	56.9
6		λ Canis Maj.	4	—33 22	14.3	40.3	6 17 06.1	32.1	58.2
7		Moon I	(10.5)	+25 21	55.6	20.5	6 20 45.4	10.3	34.9
*8		δ Ursæ Min.	3	+86 35			6 23 51.8		
9		51(Hev.)Cephei	5	+87 16			6 25 25.0		
10		γ Geminorum	3	+16 31	35.2	58.0	6 29 20.6	43.3	5.5
11		25 Geminorum	7.8	+28 20	19.5	44.2	6 32 09.0	33.8	58.4
12		ε Geminorum	3	+25 17	10.5	34.4	6 34 58.3	22.2	46.1
13		α Canis Maj.	1	—16 30	11.5	34.2	6 38 56.8	19.5	42.2
14		*d* Geminorum	6	+21 56	4.0	27.3	6 42 50.7	14.1	37.5
15		849 A. S. C.	5	—34 11	1.3	27.5	6 45 53.6	19.8	46.0
16		ι Canis Maj.	4.5	—16 51	5.8	28.7	6 49 51.1	14.4	36.7
*17		ε Canis Maj.	2.3	—28 46	21.2	46.0	6 53 10.6	35.5	0.5
*18		ζ Geminorum	4	+20 48	48.5	6.8	6 55 29.9	53.1	16.3
*19	21	δ Ursæ Min.	3	+86 35			6 23 47.0		
20		51(Hev.)Cephei	5	+87 16			6 25 30.0		
21		γ Geminorum	3	+16 31	35.5	58.0	6 29 20.6	43.2	5.8
22		25 Geminorum	7.8	+28 20	20.0	44 5	6 32 09.2	33.9	58.5
23		ε Geminorum	3	+25 17	10.5	34.3	6 34 58.2	22.2	46.4
24		α Canis Maj.	1	—16 30	11.5	34.2	6 38 56.8	19.3	42.0
25		*d* Geminorum	6	+21 56	4.0	27.5	6 42 50.5	14.3	37.5
26		849 A. S. C.	5	—34 11	1.0	27.1	6 45 53.3	19.5	45.7
27		ι Canis Maj.	4.5	—16 51	5.7	28.5	6 49 51.2	13.9	36.5
*28		ε Canis Maj.	2.3	—28 46			6 53	35.6	0.1
*29		ζ Geminorum	4	+20 48	44.0	7.2	6 55 30.3	53.5	16.6
*30		ο Geminorum	6	+16 11	19.2	41.7	7 00 04.2	26.7	49.2
31		886 A. S. C.	6	—24 59	10.3	34.1	7 03 58.0	22.0	46.0
32		893 A. S. C.	7.8	+16 25	41.3	4.0	7 08 26.5	49.2	11.9
33		δ Geminorum	3.4	+22 16	40.1	3.6	7 11 27.0	50.5	14.0
34		59 Geminorum	6.7	+27 56	40.5	5.2	7 15 29.8	54.3	18.6
35		β Canis Min.	3	+ 8 36	36.8	58.7	7 19 20.7	42.7	4.6
36		924 A. S. C.	6	—28 50	39.2	4.0	7 22 28.7	53.4	18.2
37		Moon I	(11.6)	+22 49	19.6	43.9	7 26 08.1	32 3	56.5
38		υ Geminorum	5	+27 14			7 26	22.0	46.2
39		α Canis Min.	1.2	+ 5 37	4.1	26.0	7 31 47.8	9.6	31.4
40		β Geminorum	2	+28 24	35.6	0.2	7 36 24.8	49.4	14.1
41	22	υ Geminorum	5	+27 14	8.5	32 9	7 26 57.2	21 6	46.1
42		α Canis Min.	1.2	+ 5 37	4.2	26.0	7 31 47.8	9.6	31.4
43		β Geminorum	2	+28 24	35.5	0.2	7 36 24.8	49.5	14.2
44		B Geminorum	7	+23 32	5.5	29.2	7 39 52.8	16.5	40.2
45		ζ Canis Min.	5.6	+ 2 10	33.0	54.7	7 44 16.5	38.2	59.9
46		*b* Arg. in pup.	5	—38 27	54.2	22.0	7 47 49.7	17.4	45.0
47		ω^1 Cancri	6.7	+25 49	20.2	44.3	7 52 08.5	32.6	56.7
48		8 Cancri	6	+13 34	18.3	40.5	7 57 02.8	25.1	47.4
49		15 Argus	3.4	—23 51	48.0	11.6	8 01 35.3	59.0	22.7
*50		ζ Cancri	6.7	+18 07	9.8	32.6	8 03 55.3	18.2	41.0
51		β Cancri	4	+ 9 40	59.1	21.2	8 08 43.1	5.2	27.1

February 21.—Perfectly clear. Collimation and level as yesterday; azimuth changed.
22.—Perfectly clear.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
5	55	17.84	— .332			+0	42.85	+0.24	5	54	34.66	1
6	02	36.56	— .265				.85		6	01	53.44	2
6	06	06.08	— .296				.85		6	05	22.93	3
6	09	09.50	— .476				.85		6	08	26.17	4
6	14	09.74	— .295	+0	42.94		.85		6	13	26.59	5
6	17	06.20	— 1.086				.85		6	16	22.26	6
6	20	45.34	— .251				.85		6	20	02.24	7
6	23	51.80	—13.020		42.38		.85		18	22	55.93	*8
6	25	25.00	+15.279		42.78		.85		6	24	57.43	9
6	29	20.52	— .375				.85		6	28	37.29	10
6	32	08.98	— .202				.85		6	31	25.93	11
6	34	58.30	— .252				.85		6	34	15.20	12
6	38	56.84	— .832		42.75		.85		6	38	13.16	13
6	42	50.72	— .305				.85		6	42	07.56	14
6	45	53.64	— 1.122				.85		6	45	09.67	15
6	49	51.34	— .838				.85		6	49	07.65	16
6	53	10.76	— 1.055	+0	42.61		.85		6	52	26.85	*17
6	55	29.92	— .322			+0	42.86	+0.24	6	54	46.75	*18
6	23	47.00	— 8.838	+0	41.47	+0	43.13	+0.27	18	22	55.03	*19
6	25	30.00	+10.169		43.05		.14		6	24	57.03	20
6	29	20.62	— .258				.14		6	28	37.22	21
6	32	09.22	— .135				.14		6	31	25.94	22
6	34	58.32	— .169				.14		6	34	15.01	23
6	38	56.76	— .558		42.96		.14		6	38	13.06	24
6	42	50.76	— .204				.14		6	42	07.42	25
6	45	53.32	— .752				.14		6	45	09.43	26
6	49	51.16	— .562				.14		6	49	07.46	27
6	53	10.70	— .686		42.93		.14		6	52	26.87	*28
6	55	30.82	— .216				.14		6	54	46.96	*29
7	00	04.20	— .261				.14		6	59	20.80	*30
7	03	58.08	— .644				.14		7	03	14.30	31
7	08	26.58	— .258				.14		7	07	43.18	32
7	11	27.04	— .201		43.14		.14		7	10	43.70	33
7	15	29.68	— .140				.14		7	14	46.40	34
7	19	20.70	— .332				.14		7	18	37.23	35
7	22	28.70	— .687				.14		7	21	44.87	36
7	26	08.08	— .195				.14		7	25	24.74	37
7	26	57.46	— .147				.14		7	26	14.17	38
7	31	47.78	— .358		43.30		.14		7	31	04.28	39
7	36	24.82	— .134	+0	43.35	+0	43.14	+0.27	7	35	41.55	40
7	26	57.26	— .098			+0	43.43	+0.24	7	26	13.73	41
7	31	47.80	— .237	+0	43.45		.43		7	31	04.13	42
7	36	24.84	— .089		43.42		.43		7	35	41.32	43
7	39	52.84	— .124				.43		7	39	09.29	44
7	44	16.46	— .257				.48		7	43	32.77	45
7	47	49.66	— .536				.43		7	47	05.69	46
7	52	08.46	— .108				.43		7	51	24.92	47
7	57	02.82	— .194				.43		7	56	19.20	48
8	01	35.32	— .417	+0	43.42		.43		8	00	51.47	*49
8	03	55.38	— .160				.43		8	03	11.79	*50
8	08	43.14	— .213			+0	43.43	+0.24	8	07	59.50	51

Nos. 8, 19. δ Ursæ Minoris, sub-polo.
17, 18, 28, 29, 30. Two stars in the field of the instrument.
50. ζ Cancri double; stars equal.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V
					s.	s.	h. m. s.	s.	s.
1	Feb. 22	1013 A. S. C.	6.7	+21°15	9.7	31.2	8 11 54.3	17.8	41.0
2	cont'd.	d^1 Cancri	6	+18 50	19.5	42.5	8 15 05.3	28.2	51.3
*3		λ Ursæ Min.	6	+88 50			8 19 29.5		
4		θ Cancri	5.6	+18 38	35.5	58.5	8 23 21.3	44.3	7.2
5		π^2 Ursæ Maj.	5	+64 53	26.3	17.5	8 27 08.5	59.6	51.0
6		Moon I	(12.6)	+18 24	2 5	26.0	8 29 49.6	13.1	36.6
7		6 Hydræ	5 6	—11 55	34.4	56.5	8 33 18.6	40.8	3.9
8		δ Cancri	4.5	+18 44	43.0	5.8	8 36 28.5	51.4	14.5
9		54 Cancri	6.7	+15 56	14.5	37.2	8 42 59.8	22.5	45.0
10		ρ^4 Cancri	6	+28 32	8.6	33.3	8 46 58.0	22.8	47.5
11		α^2 Cancri	5	+12 28	52.8	15.0	8 50 37.1	59.3	21.5
12	23	δ Cancri	4.5	+18 44	43.2	6.1	8 36 29.0	51.9	14.8
13		ε Hydræ	4	+ 7 00	27.5	49.3	8 39 11.1	33.0	54.9
14		54 Cancri	6.7	+15 56	15.0	37.5	8 43 00.0	22.5	45.2
15		ρ^4 Cancri	6	+28 32	8.9	33.6	8 46 58.3	23.0	47.8
16		α^2 Cancri	5	+12 28	53.0	15.2	8 50 37.3	59.5	21.8
*17		76 Draconis	5	+81 56			8 54 13.5		
18		ω Hydræ	6	+ 5 43	42.0	3.7	8 58 25.6	47.5	9.3
19		1112 A. S. C.	5.6	—25 13	5.5	29.5	9 01 53.5	17.5	41.5
20		θ Hydræ	4.5	+ 2 59	11.7	33.5	9 06 55.2	17.0	38.7
21		q Cancri	7	+18 23	10.5	33.5	9 10 56 3	19.2	42.1
22		θ Pixid. Naut.	5	—25 17	28.6	52.5	9 15 16.5	40.6	4.6
23		α Hydræ	2	— 7 59	52.2	14.2	9 20 36.1	58.0	19.9
24		ξ Leonis	5	+12 00	28.0	50.2	9 24 12.3	34.5	56.7
*25		β Cephei	3	+69 52		14.5	9 27 18.0	21.2	
26		Moon I	(13.7)	+12 40	6.8	29.5	9 30 52 1	14.8	37.5
27		ο Leonis	4	+10 36	45.4	7.5	9 33 29.5	51.6	13.6
28		ε Leonis	3	+24 30	51.5	15.5	9 37 39.4	3.2	27.1
29		φ Ursæ Maj.	5	+54 48	51.6	29.4	9 42 07.1	44.7	22.3
30		9 Sextantis	7.8	+ 5 42	34.0	15.8	9 46 37.6	39.5	21.2
31		11 Sextantis	6	+ 9 04	47.9	9.8	9 50 31.8	53.8	15.8
32		1199 A. S. C.	7.8	—12 32	55.8	18.5	9 55 40.4	2.5	24.6
33		α Leonis	1	+12 44	59.5	21.8	10 00 44.0	6.3	28.5
34	24	ο Leonis	4	+10 36	45.6	7.6	9 33 29.6	51.7	14.1
35		ε Leonis	3	+24 30	52.0	15.8	9 37 39.7	3.5	27.3
36		φ Ursæ Maj.	5	+54 48	52.0	29.5	9 42 07.2	45.0	22.5
37		9 Sextantis	7.8	+ 5 42	54.2	16.1	9 46 37.8	59.5	21.3
38		11 Sextantis	6	+ 9 04	48.2	10.0	9 50 32.0	54.0	16.0
39		1199 A. S. C.	7.8	—12 32	56.0	18.3	9 55 40.4	2.6	25.0
40		α Leonis	1	+12 44	59.7	22.0	10 00 44.2	6.5	28.7
41		1215 A. S. C.	6	— 6 32	27.5	49.3	10 04 11.2	33.1	54.9
42		1220 A. S. C.	6	+18 32	40.8	3.6	10 08 26.3	49.3	12.2
43		γ Leonis	2	+20 39	16.1	39.4	10 12 02.5	25.7	48.9
44		z Leonis	6	+ 7 21	47.5	9.4	10 15 31.2	53.1	15.0
45		μ Hydræ	4	—16 02	29.0	51.4	10 19 13.9	36.5	59.1
46		1249 A. S. C.	5.6	—28 51	8.8	33.6	10 22 58.6	23.3	48.0
47		48 Leonis	5.6	+ 7 46	36.6	58.5	10 27 20.4	42.3	4.2
48		Moon I	(14.7)	+ 6 03	38.2	55.6	10 29 17.9	40.2	2.5
49		Moon II	(14.7)	+ 6 03	53.2	15.5	10 31 37.8	0.1	22.4
*50		35 Sextantis	6	+ 5 35	12.0	33.8	10 35 55.6	17.5	39.3
51		b^1 Hyd. & Crat.	6	—16 28	9.5	32.3	10 39 54.5	17.5	40.0

February 23.—Light haze. No error of collimation or level.
24.—Hazy.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
8	11	54.40	— .140			+0	43.43	+0.24	8	11	10.83	1
8	15	05.36	— .156				.43		8	14	21.77	2
8	19	29.50	—16.741	+0	43.86		.43		20	18	29.33	*3
8	23	21.36	— .154				.43		8	22	37.78	4
8	27	08.58	+ .444				.43		8	26	25.59	5
8	29	49.56	— .159				.43		8	29	05.97	6
8	33	18.66	— .341				.43		8	32	34.89	7
8	36	28.64	— .154				.43		8	35	45.06	8
8	42	59.80	— .174				.44		8	42	16.19	9
8	46	58.04	— .089				.44		8	46	14.51	10
8	50	37.14	— .196			+0	43.44	+0.24	8	49	53.50	11
8	36	29.00	— .288			+0	43.63	+0.38	8	35	45.08	12
8	39	11.16	— .424	+0	43.64		.63		8	38	27.11	13
8	43	00.04	— .325				.63		8	42	16.08	14
8	46	58.32	— .164				.63		8	46	14.53	15
8	50	37.36	— .364				.64		8	49	53.36	16
8	54	13.50	— 4.946				.64		20	53	24.91	*17
8	58	25.62	— .441				.64		8	57	41.54	18
9	01	53.50	— .796				.64		9	01	09.06	19
9	06	55.22	— .481				.64		9	06	11.10	20
9	10	56.32	— .296				.64		9	10	12.38	21
9	15	16.56	— .796				.64		9	14	32.12	22
9	20	36.08	— .589		43.44		.64		9	19	51.85	23
9	24	12.34	— .347				.64		9	23	28.35	24
9	27	17.90	— 2.325		43.64		.64		21	26	31.93	*25
9	30	52.14	— .362				.64		9	30	08.14	26
9	33	29.52	— .386				.64		9	32	45.49	27
9	37	39.34	— .218		43.66		.64		9	36	55.48	28
9	42	07.02	+ .380				.64		9	41	23.76	29
9	46	37.62	— .440				.64		9	45	53.54	30
9	50	31.82	— .403				.64		9	49	47.78	31
9	55	40.36	— .640				.64		9	54	56.08	32
10	00	44.02	— .361	+0	43.61	+0	43.65	+0.38	10	00	00.01	33
9	33	29.72	— .096			+0	44.11	+0.46	9	32	45.51	34
9	37	39.66	— .055	+0	44.14		.12		9	36	55.48	35
9	42	07.24	+ .095				.12		9	41	23.21	36
9	46	37.78	— .110				.12		9	45	53.55	37
9	50	32.04	— .101				.12		9	49	47.82	38
9	55	40.46	— .160				.12		9	54	56.18	39
10	00	44.18	— .090	+0	44.03		.13		9	59	59.96	40
10	04	11.20	— .145				.13		10	03	26.92	41
10	08	26.44	— .073				.13		10	07	42.24	42
10	12	02.52	— .067				.13		10	11	18.32	43
10	15	31.24	— .106				.13		10	14	47.00	44
10	19	13.98	— .170				.13		10	18	29.68	45
10	22	58.44	— .211				.13		10	22	14.10	46
10	27	20.40	— .104				.13		10	26	36.17	47
10	29	17.88	— .109				.13		10	28	33.64	48
10	31	37.80	— .109				.13		10	30	53.56	49
10	35	55.64	— .110				.13		10	35	11.40	*50
10	39	54.76	— .172			+0	44.13	+0.46	10	39	10.46	51

Nos. 3, 17, 25. Sub polo.
50. 35 Sextantis seen double; smaller star of the 7th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Feb. 24 cont'd.	b^3 Hyd.& Crat.	5.6	—19°17′	46.8	9.8	10 46 32.8	55.9	18.5
2		1299 A. S. C.	5	—36 17	15.3	42.1	10 50 09.0	35.9	2.6
*3		α Ursæ Maj.	1.2	+62 36		57.5	10 54 44.5	31.5	
4		χ Leonis	4.5	+ 8 11	55.0	17.0	10 57 39.0	0.9	22.3
5	27	q Virginis	5.6	— 8 35	42.0	3.5	12 26 25.4	47.5	9.5
6		d Hyd.& Crat	5.6	—26 15	19.5	44.2	12 30 08.0	32.8	56.5
7		γ^1 Virginis	3	— 0 35	43.7	5.5	12 34 27.2	48.9	10.5
8		33 Virginis	6.7	+10 26	24.5	46.6	12 39 08.6	30.6	52.6
9		1480 A. S. C.	7	— 9 28	13.6	35.5	12 43 57.5	19.5	41.5
10		ψ Virginis	5.6	— 8 41	12.5	34.4	12 46 56.3	18.1	40.1
11		r Comæ Ber.	5.6	+18 16	8.5	31.3	12 51 54.1	17.0	40.0
12		k^4 Virginis	6.7	— 2 49	50.3	12.1	12 56 33.8	55.6	17.3
13		g Virginis	6	— 9 54	41.0	3.2	13 00 25.2	47.2	9.3
*14		α Ursæ Min.	2.3	+88 28			13 03 03.0		
15		55 Virginis	6.7	—19 06	46.0	8.9	13 06 31.9	54.8	17.8
16		58 Virginis	7.8	— 9 43	14 3	36.5	13 09 58.3	20.4	42.5
17		62 Virginis	7.8	—10 28	5.8	28.0	13 12 50.2	12.4	34.4
18		α Virginis	1	—10 20	55.7	18.0	13 17 40.2	2.3	24.4
19		Moon II	(17.8)	—13 44	48.0	10.8	13 19 32.7	56.6	19.6
20		75 Virginis	6.7	—14 33	28.3	50.7	13 25 13.2	35.7	58.2
*21		f Hydræ con.	6.7	—25 42	2.6	26.8	13 28 50.9	15.0	59.1
*22		1 Bootis	6	+20 46	8.7	32.0	13 33 55.2	18.4	41.6
23		85 Virginis	6.7	—14 58	7.8	30.2	13 37 52.6	15.1	37.5
24		x Virginis	5.6	—17 20	19.6	42.5	13 42 05.0	28.2	50.7
25	March 2	α Cor. Bor.	2	+27 15	59.0	23.5	15 28 47.9	12.3	36.7
26		κ Libræ	5	—19 10	53.8	16.6	15 33 39.5	2.4	25.5
27		α Serpentis	2.3	+ 6 55	34.0	55.8	15 37 17.6	39.4	1.3
28		b Scorpii	5	—25 16	30.0	54.0	15 42 18.0	42.0	5.8
29		f^2 Scorpii	6	—23 30	33.5	57.3	15 45 21.0	44.6	8.3
30		π Scorpii	3.4	—25 39	18.5	42.8	15 50 06.8	31.0	55.0
31		1829 A. S. C.	6	—25 25	49.0	13.1	15 54 37.1	1.1	25.0
*32		β^1 Scorpii	2	—19 22	18.1	41.2	15 57 04.1	27.0	50.0
33		m Scorpii	6	—25 54	31.0	55.0	15 59 19.0	43.1	7.1
34		c^2 Scorpii	5	—27 30	34.5	59.1	16 03 23.6	48.1	12.5
35		δ Ophiuchi	3	— 3 17	9.0	30.8	16 06 52.5	14.3	36.0
36		Moon II	(20.9)	—25 15	11.4	56.2	16 12 00.9	25.6	50.4
37		γ Herculis	4	+19 32	59.2	22.0	16 15 45.2	8.2	31.3
38		α Scorpii	1	—26 05	44.0	8.1	16 20 32.3	56.4	20.5
*39		η Draconis	3	+61 52		52.6	16 22 38.5	24.5	
40		τ Scorpii	3.4	—27 58	2.9	27.5	16 26 52.0	18.5	41.1
41		33 Herculis	7.8	+ 7 26	15.5	37.5	16 29 59.5	21.5	43.2
42		24 Scorpii	5	—17 26	29.5	52.2	16 33 15.0	37.7	0.4
*43		552 A. S. C.	4.5	+66 04	27.0	20.5	16 39 14.0	7.5	1.0
44		21 Ophiuchi	6	+ 1 29	29.0	50.6	16 44 12.3	34.0	55.7
45	16	ι Canis Maj.	4.5	—16 51	12.5	35.1	6 49 57.7	20.4	43.0
*46		ε Canis Maj.	2.3	—28 46	27.8	52.5	6 53 17.2	42.0	6.8
47		σ Canis Maj.	4	—27 43	28.8	53.2	6 56 17.6	42.1	6.6
*48		τ Geminorum	5	+30 30	7.0	32.2	7 01 57.3	22.5	47.7
49		z Geminorum	6	+28 10	8.2	32.9	7 06 57.5	22.1	46.6
*50		δ Geminorum	3.4	+22 16	46.5	10.1	7 11 33.5	57.0	20.5

February 27.—Error of collimation was found to be +0s.39; no errors of azimuth or level. Unable to separate γ Virginis with power 87.

March 2—Collimation adjusted; level undisturbed; clear.
16—Clear; no errors of level or collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
10	46	32.82	— .180			+0	44.13	+0.46	10	45	48.51	1
10	50	09.02	— .240				.13		10	49	24.65	2
10	54	44.50	+ .175	+0	44.15		.13		10	54	00.54	*3
10	57	38.94	— .103			+0	44.14	+0.46	10	56	54.70	4
12	26	25.58	+ .394			+0	45.46	+0.34	12	25	40.51	5
12	30	08.20	+ .435				.47		12	29	23.16	6
12	34	27.16	+ .390				.47		12	33	42.08	7
12	39	08.58	+ .396				.47		12	38	23.51	8
12	43	57.52	+ .395				.47		12	43	12.44	9
12	46	56.28	+ .395				.47		12	46	11.20	10
12	51	54.18	+ .412				.47		12	51	09.12	11
12	56	33.82	+ .391				.47		12	55	48.74	12
13	00	25.18	+ .396				.47		12	59	40.11	13
13	03	03.00	—14.528	+0	45.82		.47		1	02	03.01	*14
13	06	31.88	+ .412				.47		13	05	46.82	15
13	09	58.40	+ .396				.47		13	09	13.33	16
13	12	50.16	+ .396				.47		13	12	05.09	17
13	17	40.12	+ .396	+0	45.47		.47		13	16	55.05	18
13	19	33.74	+ .402				.47		13	18	48.67	19
13	25	13.22	+ .403				.47		13	24	28.15	20
13	28	50.88	+ .433				.47		13	28	05.84	*21
13	33	55.18	+ .417				.47		13	33	10.13	*22
13	37	52.64	+ .404				.47		13	37	07.57	23
13	42	05.20	+ .408			+0	45.48	+0.34	13	41	20.13	24
15	28	47.88	— .080	+0	46.11	+0	46.29	+0.28	15	28	01.51	25
15	33	39.56	— .314				.29		15	32	52.96	26
15	37	17.62	— .186		46.42		.29		15	36	31.14	27
15	42	17.96	— .348				.29		15	41	31.32	28
15	45	20.94	— .338				.29		15	44	34.31	29
15	50	06.82	— .350				.29		15	49	20.18	30
15	54	37.06	— .349				.29		15	53	50.42	31
15	57	04.08	— .315		46.45		.29		15	56	17.47	*32
15	59	19.04	— .352				.29		15	58	32.40	33
16	03	23.56	— .361				.29		16	02	36.91	34
16	06	52.52	— .235		46.28		.29		16	06	05.99	35
16	12	00.90	— .348				.29		16	11	14.26	36
16	15	45.18	— .123				.29		16	14	58.77	37
16	20	32.26	— .353		46.25		.29		16	19	45.62	38
16	22	38.53	+ .290	+0	46.24		.29		16	21	52.53	*39
16	26	52.00	— .364				.29		16	26	05.35	40
16	29	59.44	— .184				.29		16	29	12.97	41
16	33	14.96	— .395				.29		16	32	28.36	42
16	39	14.00	— .905				.29		4	38	26.81	*43
16	44	12.32	— .212			+0	46.29	+0.28	16	43	25.82	44
6	49	57.74	— .249			+0	50.10	+0.12	6	49	07.39	45
6	53	17.26	— .316	+0	50.25		.10		6	52	26.84	*46
6	56	17.66	— .311				.10		6	55	27.25	47
7	01	57.34	— .050				.10		7	01	07.19	*48
7	06	57.46	— .063				.10		7	06	07.30	49
7	11	33.52	— .092	+0	50.05	+0	50.10	+0.12	7	10	43.33	*50

Nos. 3, 22, 43, 46, 48, 50 Two stars in the field of the instrument.
14, 39. α Ursæ Minoris and 552 A. S. C. sub-polo.
21. *f* Hydræ con. double; the smaller star of the 7.8 magnitude.
32. The companion to β Scorpii is of the 6th magnitude.
39. Three stars in the field.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 16	59 Geminorum	6.7	+27°56′	46.6	11.2	7 15 35.9	0.5	25.1
2	cont'd.	β Canis Min.	3	+ 8 36	43.5	5.5	7 19 27.3	49.2	11.2
3		924 A. S. C.	6.7	—28 50	45.8	10.5	7 22 35.2	0.0	24.7
4		υ Geminorum	5	+27 15	14.6	39.2	7 27 03.6	28.0	52.4
*5		α Canis Min.	1.2	+ 5 37	10.5	32.3	7 31 54.0	15.7	37.6
6		β Geminorum	2	+28 24	41.9	6.5	7 36 31.2	55.9	20.5
7		B Geminorum	7	+23 32	11.6	35.5	7 39 59.3	22.9	46.7
*8		ξ Argus	4	—24 28	43.5	7.5	7 43 31.3	55.2	19.0
9	20	α Canis Maj.	1	—16 30			6 38 57.0	19.8	
10		d Geminorum	6	+21 56	4.0	27.5	6 42 50.9	14.3	37.7
11		ι Canis Maj.	4.5	—16 51			6 49 51.5	14.2	36.8
12		ε Canis Maj.	2.3	—28 46	51.2	45.9	6 53 10.5	35.2	0.0
13		σ Canis Maj.	4	—27 43	22.2	46.8	6 56 11.2	35.6	0.2
14		Moon I.	(8.7)	+23 56	37.4	1.8	6 59 26.2	50.4	14.6
15		20 Monocerotis	5.6	— 4 00	25.7	47.5	7 03 09.3	31.0	52.8
16		z Geminorum	6	+28 10	2.0	26.5	7 06 51.0	15.6	40.2
17		δ Geminorum	3.4	+22 16	40.5	4.1	7 11 27.6	51.1	14.5
18		910 A. S. C.	6	—25 36	32.3	56.5	7 15 20.8	45.0	9.2
19		β Canis Maj.	3	+ 8 36	37.5	59.6	7 19 21.6	43.6	5.5
20		924 A. S. C.	6	—28 50	39.2	4.0	7 22 28.7	53.5	18.3
21		δ² Canis Min.	5.6	+ 3 37	58.0	19.7	7 25 41.5	3.2	25.0
*22		n¹ Arg. in pup.	6	—23 08	37.0	0.5	7 28 24.1	47.7	11.2
*23		α Canis Min.	1.2	+ 5 37	4.6	26.5	7 31 48.4	10.3	32.1
24		β Geminorum	2	+28 24	35.5	0.2	7 36 24.8	49.5	14.3
25		δ Cancri	4.5	+18 44	43.0	6.0	8 36 28.9	51.8	14.6
26		ε Hydræ	4	+ 7 00	27.6	49.5	8 39 11.4	33.3	55.0
*27		ρ² Cancri	6	+28 56	7.0	32.2	8 43 57.2	22.3	47.5
*28		o¹ Cancri	6	+15 55	27.6	50.3	8 49 12.6	35.4	57.7
29	25	b³ Hyd.&Crat.	6	—19 17	50.1	13.0	10 46 35.9	59.0	22.1
30		57 Leonis	7	+ 1 17			10 48 54.2	16.0	37.8
31		β Ursæ Maj.	2	+57 14	47.1	27.1	10 53 07.2	47.4	27.5
32		χ Leonis	4.5	+ 8 11	58.1	20.1	10 57 42.0	3.9	25.9
33		67 Leonis	6	+25 31	22.0	46.2	11 01 10.2	34.3	58.3
34		δ Leonis	3	+21 23	45.3	8.8	11 06 32.1	55.4	18.8
35		δ Hyd.&Crat.	3.4	—13 56	32.1	54.5	11 12 16.8	39.2	1.5
36		λ Hyd.&Crat.	6	—17 54	36.6	59.5	11 16 22.3	45.2	8.0
37		κ Hyd.&Crat.	6	—11 29	17.8	40.1	11 20 02.2	24.5	46.6
38		e Leonis	4.5	— 2 08	21.2	43.0	11 23 04.8	26.5	48.2
39		ξ Hyd.&Crat.	4	—30 59	14.3	39.5	11 26 04.7	30.0	55.5
40		21 Hyd.&Crat.	5	— 8 55	46.5	8.5	11 29 30.5	.52.4	14.4
*41		γ Cephei	3	+76 45		4.1	11 33 39.4	13.9	
42		ζ Hyd.&Crat.	4	—17 28	50.3	13.2	11 37 35.8	58.5	21.2
43		θ Leonis	2.3	+15 27	5.0	27.5	11 41 50.0	12.5	35.0
44		γ Ursæ Maj.	2	+54 34	6.0	43.3	11 46 20.7	58.1	35.7
*45		Moon I.	(13.9)	— 4 01	6.5	28.5	11 51 50.8	13.5	35.5
46		1390 A. S. C.	7	+ 6 27	47.0	8.8	11 56 30.5	52.3	14.1
47		α Corvi	4.5	—23 51	19.2	43.0	12 01 06.8	30.5	54.3
48		4 Comæ Ber.	6	+26 45	51.5	16.0	12 04 40.3	4.5	28.8
49		h Comæ Ber.	5	+24 50	23.1	47.0	12 09 10.9	34.9	58.9
50		η Virginis	3.4	+ 0 13	56.0	17.8	12 12 39.5	1.3	23.0

March 20.—The error of collimation was ascertained to be +6s.00, after the observations. Cumuli.

25.—Hazy. The collimation error was corrected. The moon was extremely difficult to observe, from tremulousness.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
7	15	35.86	— .064			+0	50.10	+0.12	7	14	45.70	1
7	19	27.34	— .153				.10		7	18	37.09	2
7	22	35.24	— .317				.10		7	21	44.82	3
7	27	03.56	— .068				.10		7	26	13.39	4
7	31	54.02	— .165	+0	50.02		.10		7	31	03.75	*5
7	36	31.20	— .062	+0	50.10		.10		7	35	41.04	6
7	39	59.20	— .087				.10		7	39	09.01	7
7	43	31.30	— .294			+0	50.10	+0.12	7	42	40.91	*8
6	38	57.03	+6.187	+0	50.43	+0	50.61	—0.42	6	38	12.61	9
6	42	50.88	+6.443				.61		6	42	06.71	10
6	49	51.50	+6.197				.61		6	49	07.09	11
6	53	10.56	+6.758		50.72		.61		6	52	26.71	12
6	56	11.20	+6.694				.60		6	55	27.29	13
6	59	26 08	+6.541				.60		6	58	42.02	14
7	03	09.26	+5.957				.60		7	02	24.62	15
7	06	51.06	+6.788				.60		7	06	07.25	16
7	11	27.56	+6.460		50.70		.60		7	10	43.42	17
7	15	20.76	+6.570				.60		7	14	36.73	18
7	19	21.56	+6.023				.60		7	18	36.98	19
7	22	28.74	+6.762				.60		7	21	44.90	20
7	25	41.48	+5.963				.60		7	24	56.84	21
7	28	24.10	+6.081				.60		7	27	39.58	*22
7	31	48.38	+6.020		50.62		.60		7	31	03.80	*23
7	36	24.86	+6.805		50.69		.60		7	35	41.06	24
8	36	28.86	+6.306				.58		8	35	44.59	25
8	39	11.36	+5.998	+0	50.46		.58		8	38	26.78	26
8	43	57.24	+6.838				.58		8	43	13.50	*27
8	49	12.72	+6.205			+0	50.58	—0.42	8	48	28.34	*28
10	46	36.02	— .405			+0	47.17	—0.35	10	45	48.44	29
10	48	54.28	— .274				.17		10	48	06.84	30
10	53	07.26	+ .261				.17		10	52	20.35	31
10	57	42.00	— .230				.17		10	56	54.60	32
11	01	10.20	— .115				.16		11	00	22.92	33
11	06	32.08	— .145	+0	47.06		.16		11	05	44.77	34
11	12	16.82	— .369		46.81		.16		11	11	29.29	35
11	16	22.32	— .389				.16		11	15	34.77	36
11	20	02.24	— .343				.16		11	19	14.74	37
11	23	04.74	— .296				.16		11	22	17.28	38
11	26	04.80	— .493				.16		11	25	17.15	39
11	29	30.46	— .338				.16		11	28	42.96	40
11	33	39.13	—1.962		47.25		.16		23	32	50.01	*41
11	37	35 80	— .393				.16		11	36	48.25	42
11	41	50.00	— .186		47.00		.16		11	41	02.65	43
11	46	20.76	+ .209	+0	47.28		.16		11	45	33.81	44
11	51	50.96	— .307				.16		11	51	03.49	*45
11	56	30.54	— .243				.16		11	55	43.14	46
12	01	06.76	— .437				.16		12	00	19.16	47
12	04	40.22	— .106				.16		12	03	52.95	48
12	09	10.96	— .121				.16		12	08	23.68	49
12	12	39.52	— .284			+0	47.15	—0.35	12	11	52.09	50

Nos. 5, 8, 23, 27, 28. Two stars in the field of the instrument.
22. π¹ Arg. in pup. double; stars equal; observed preceding.
41. γ Cephei, sub polo.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s
*1	Mar. 26	γ Cephei	3	+76°45′	28.2	3.4	11 33 38.0	12.6	47.5
2		β Leonis	2.3	+15 27	3 8	26.3	11 41 48.8	11.3	33.5
3		γ Ursæ Maj.	2	+54 34	4.5	42.0	11 46 19.5	57.0	34.5
4		1383 A. S. C.	7	+ 4 22	13.6	35.3	11 50 57.0	18.8	40.5
5		1390 A. S. C.	7	+ 6 27	46.0	7.8	11 56 29.6	51.5	13.2
6		α Corvi	4.5	—23 51	18.5	42.2	12 01 05.8	29.5	53.2
7		4 Comæ Ber.	6	+26 45	50.5	14.8	12 04 39.1	3.4	27.7
8		δ Ursæ Maj.	3	+57 55	3.4	44.3	12 08 25.0	5.8	47.0
9		η Virginis	3.4	+ 0 13	55.2	17.0	12 12 38.7	0.4	22.0
*10		ι Corvi	5.6	—23 58	10.2	34.0	12 15 57.8	21.5	45.4
*11		c Comæ Ber.	5	+29 09	3.3	28.0	12 19 52.8	17.6	42.5
12		19 Virginis	8	+10 36	37.2	59.5	12 23 21.5	43.5	5.6
*13		β Corvi	2.3	—22 32	8.4	31.7	12 26 55.2	18.7	42.2
14		d Hyd.&Crat.	6	—26 15	21.5	45.6	12 30 09.7	34.0	58.2
15		γ^1 Virginis	3	— 0 35	45.2	7.0	12 34 28.6	50.3	12.0
16		33 Virginis	6	+10 26	26.1	48.2	12 39 10.2	32.3	54.3
17		30 Comæ Ber.	6	+28 25	35.2	59.8	12 42 24.5	49.2	14.0
18		q Comæ Ber.	5	+22 07	33.3	56.8	12 46 20.1	43.5	6.8
19		Moon II	(14.9)	—10 30	25.7	48.5	12 50 11.1	33.7	56.4
20		38 Comæ Ber.	6.7	+17 59	24.5	47.2	12 54 10.0	32.8	55 5
21		Virginis	7	—14 04	37.5	0.0	12 59 22.2	44.3	6.6
22		θ Virginis	4.5	— 4 42	52.2	14.0	13 02 35.8	57.4	19.6
23		55 Virginis	6	—19 06	47.7	10.5	13 06 33.5	56.5	19 5
24		58 Virginis	7	— 9 43	16.1	38.2	13 10 00.2	22.2	44.2
25		62 Virginis	7	—10 28	7.6	29.6	13 12 51.6	13.7	36 0
26		α Virginis	1	—10 20	57.8	19.8	13 17 41.8	3.9	26.0
27	27	38 Comæ Ber.	6	+17 59	24.1	46.9	12 54 09.6	32.5	55.3
28		1502 A. S. C.	7	—14 04	11.6	33.9	12 58 56.1	18.5	40.7
29		θ Virginis	4.5	— 4 42	51.8	13.6	13 02 35.3	57.1	19.0
30		55 Virginis	6	—19 06	47.3	10.3	13 06 33.4	56.4	19.4
31		58 Virginis	7*	— 9 43	15.8	37.8	13 09 59.8	21.9	44.0
32		62 Virginis	7	—10 28	7.5	29.5	13 12 51.5	13.6	35.6
33		α Virginis	1	—10 20	57.5	19.5	13 17 41.5	3.5	25.5
*34		w Virginis	5.6	+14 38	46.5	8.8	13 21 31.3	53.8	16.2
35		75 Virginis	6	—14 33	29.6	52.2	13 25 14.6	37.1	59.5
*36		f Hydræ con.	6	—25 41	4.3	28.4	13 28 52.4	16.5	40.5
*37		1 Bootis	6	+20 46	10.5	33.7	13 33 56.9	20.2	43.5
38		85 Virginis	6.7	—14 59		31.8	13 37 54.1	16.5	39.0
39		g Centauri	5	—33 40	15.6	41.8	13 41 08.0	34.1	0.2
40		h Centauri	5	—31 09	6.5	31.6	13 44 57.1	22.5	48.0
*41		Moon II	(16.0)	—16 13	33.8	57.1	13 47 20.5	43.7	7.0
42		S^2 Hydræ con.	6	—24 14	11.6	35.5	13 51 59.3	23.1	46.8
43		11 Bootis	6	+28 09	0.6	25.3	13 54 49.9	14.5	39.2
44		θ Centauri	2	—35 35	20.5	47.0	13 58 13.6	40.2	7.0
45		y Virginis	7	— 9 35	40.8	3.0	14 01 25.0	47.1	9.0
46		κ Virginis	4	— 9 32	33.5	55.6	14 05 17.6	39.6	1.6
47		α Bootis	1	+20 00	30.5	53.5	14 09 16.5	39.5	2.6
48		λ Virginis	5	—12 38	38.5	1.0	14 11 23.4	45.8	8.5
49	28	11 Bootis	6	+28 09	59.5	24.1	13 54 48.7	13.4	37.9
50		θ Centauri	2	—35 35	19.2	46.0	13 58 12.6	39.2	6.0
51		y Virginis	7	— 9 35	40.0	2.0	14 01 24.0	46.0	8.1

March 26.--Clear. Examined collimation, and found it correct; level error, none. Faint illumination, power 87; unable to separate γ Virginis.

27.—Examined adjustments; collimation error --0s 21; level —0s.40; azimuth correct. Moon tremulous, and difficult to observe.

28.--Clear. Collimation error +0s.50; level error --0s.40.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
11	33	37.94	—2.180	+0	45.81	+0	45.89	—0.30	23	32	49.87	*1
11	41	48.80	— .206		45.78		.88		11	41	02.71	2
11	46	19.50	+ .233		46.11		.88		11	45	33.85	3
11	50	57.04	— .284				.88		11	50	10.88	4
11	56	29.62	— .269				.88		11	55	43.47	5
12	01	05.84	— .486				.88		12	00	19.47	6
12	04	39.10	— .118				.88		12	03	53.10	7
12	08	25.10	+ .306				.88		12	07	39.53	8
12	12	38.66	— .366				.88		12	11	52.41	9
12	15	57.78	— .487				.88		12	15	11.41	*10
12	19	52.78	— .097				.88		12	19	06.80	*11
12	23	21.46	— .235				.88		12	22	35.34	12
12	26	55.24	— .475		45.92		.88		12	26	08.83	*13
12	30	09.80	— .506				.88		12	29	23.41	14
12	34	28.62	— .367				.88		12	33	42.37	15
12	39	10.22	— .242				.88		12	38	24.10	16
12	42	24.54	— .103				.88		12	41	38.56	17
12	46	20.10	— .156				.88		12	45	34.06	18
12	50	11.08	— .386				.88		12	49	24.81	19
12	54	10.00	— .188				.87		12	53	23.94	20
12	59	22.12	— .412				.87		12	58	35.84	21
13	02	35.80	— .346				.87		13	01	49.58	22
13	06	33.54	— .449				.87		13	05	47.22	23
13	10	00.18	— .381				.87		13	09	13.93	24
13	12	51.70	— .386				.87		13	12	05.44	25
13	17	41.86	— .385	+0	45.98	+0	45.87	—0.30	13	16	55.60	26
12	54	09.68	— .614			+0	45.55	—0.26	12	53	23.52	27
12	58	56.16	— .464				.54		12	58	10.16	28
13	02	35.36	— .502				.54		13	01	49.32	29
13	06	33.36	— .446				.54		13	05	47.37	30
13	09	59.86	— .481				.54		13	09	13.84	31
13	12	51.54	— .478				.54		13	12	05.52	32
13	17	41.50	— .478	+0	45.51		.54		13	16	55.48	33
13	21	31.32	— .593				.54		13	20	45.19	*34
13	25	14.60	— .463				.54		13	24	28.60	35
13	28	52.42	— .423				.54		13	28	06.46	*36
13	33	56.96	— .630				.54		13	33	10.79	*37
13	37	54.11	— .461				.54		13	37	08.11	38
13	41	07.94	— .396				.54		13	40	22.00	39
13	44	57.14	— .404				.54		13	44	11.20	40
13	47	20.42	— .457				.54		13	46	34.42	*41
13	51	59.26	— .428				.54		13	51	13.29	42
13	54	49.90	— .684				.54		13	54	03.68	43
13	58	13.66	— .390				.54		13	57	27.73	44
14	01	24.98	— .482				.54		14	00	38.96	45
14	05	17.58	— .482				.54		14	04	31.56	46
14	09	16.52	— .626	+0	45.68		.54		14	08	30.35	47
14	11	23.44	— .470			+0	45.54	—0.26	14	10	37.43	48
13	54	48.72	+ .121			+0	45.32	—0.30	13	54	03.52	49
13	58	12.60	+ .482				.32		13	57	27.76	50
14	01	24.02	+ .238			+0	45.32	—0.30	14	00	38.94	51

No. 1. γ Cephei, sub-polo.
10, 11, 13, 34, 37. Two stars in the field of the instrument.
36. *f* Hydræ con. double; smaller star of the 7.8 magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 28	κ Virginis	4	— 9°32′	32.5	54.5	14 05 16.5	38.5	0.4
2	cont'd.	α Bootis	1	+20 00	29.2	52.3	14 09 15.3	38.4	1.4
3		λ Virginis	5	—12 38	37.7	0.0	14 11 22.2	44.4	6.6
4		2 Libræ	6	—10 59	59.5	21.8	14 15 44.0	6.2	28.0
5		8 Hydræ con.	5.6	—28 46	54.6	19.7	14 19 44.1	9.1	34.1
6		ρ Bootis	4.5	+31 04	58.8	24.2	14 25 49.5	14.9	40.1
7		1651 A. S. C.	6.7	—11 37	39.5	1.7	14 29 24.0	46.2	8.4
*8		π Bootis	5.6	+17 06	20.8	43.5	14 34 05.9	28.4	51.3
*9		ε Bootis	3	+27 45	4.1	28.5	14 38 53.1	17.7	42.4
*10		α^2 Libræ	3	—15 23	11.6	34.3	14 42 56.8	19.3	41.8
11		Moon II	(17.0)	—20 52	7.3	31.3	14 45 55.2	19.2	43.3
12		β Ursæ Min.	3	+74 48	16.5	39.9	14 52 02.2	25.5	
13		20 Libræ	3.4	—24 39	50.5	14.4	14 55 38.4	2.4	26.2
*14		ν^2 Libræ	6.7	—15 52	3.3	26.0	14 58 48.5	11.1	33.8
15		c Bootis	6	+25 29	21.5	45.5	15 01 09.5	33.5	57.5
16		ι^1 Libræ	5.6	—19 11	15.5	38.4	15 04 01.3	24.3	47.3
17		β Libræ	2.3	— 8 48	34.5	56.5	15 09 18.5	40.4	2.9
*18	29	α^2 Libræ	3	—15 23	11.2	33.6	14 42 56.1	18.7	41.2
19		β Ursæ Min.	3	+74 48	17.5	40.5	14 52 02.5	25.5	48.5
20		20 Libræ	3.4	—24 39	49.7	13.6	14 55 37.6	1.6	25.5
21		c Bootis	5	+25 29	21.2	45.2	15 01 09.2	33.3	57.3
22		ι^1 Libræ	5	—19 11	15.0	38.2	15 04 01.0	24.0	47.0
23		β Libræ	2.3	— 8 48	34.2	56.1	15 09 18.1	40.0	2.0
24		o^1 Libræ	7	—14 58	14.3	36.8	15 12 59.3	21.8	44.2
25		ε Libræ	5.6	— 9 45	41.7	3.7	15 16 25.7	47.8	9.8
26		α Cor. Bor.	2	+27 15	58.4	22.8	15 28 47.2	11.6	36.1
27		κ Libræ	5	—19 10	52.5	15.5	15 33 38.5	1.5	24.5
28		α Serpentis	2.3	+ 6 55	32.8	54.6	15 37 16.5	38.3	0.2
29		b Scorpii	5	—25 16	28.5	52.6	15 42 16.6	40.6	4.6
30		Moon II	(18.1)	—24 06	49.3	14.0	15 45 38.6	3.1	27.8
31		ζ Ursæ Min.	4	+78 16		51.5	15 50 38.0		
32		δ Scorpii	3	—22 10	0.0	23.6	15 51 47.2	10.8	34.3
*33		β^1 Scorpii	2	—19 22	16.6	39.6	15 57 02.6	25.7	48.8
*34		g^2 Serpentis	7	+10 31	37.0	59.0	16 01 21.0	43.0	5.0
35		δ Ophiuchi	3	— 3 17	7.9	29.6	16 06 51.3	13.0	31.5
36		σ Scorpii	4	—25 12	35.1	59.1	16 12 23.1	47.1	11.0
37		γ Herculis	3.4	+19 32	58.2	21.2	16 15 44.2	7.2	30.2
38		α Scorpii	1	—26 05	42.6	6.7	16 20 30.9	55.1	19.2
*39		η Draconis	3	+61 52		52.0	16 22 39.3	25.5	11.8
40	31	ε Herculis	3	+31 10	9.1	34.5	16 54 59.9	25.4	50.8
41		ε Ursæ Min.	4	+82 17			17 03 04.0		
*42		A Ophiuchi	6	—26 22	36.2	0.3	17 06 24.4	48.5	12.6
43		ζ Draconis	3	+65 54			17 09 04.8	58.0	51.5
*44		θ Ophiuchi	3.4	—24 51	16.8	40.8	17 13 04.6	28.6	52.5
45		b Ophiuchi	5.6	—24 01	42.1	5.8	17 17 29.6	53.5	17.2
46		2003 A. S. C.	6	+20 13	59.3	22.5	17 20 45.6	8.7	31.9
47		λ Herculis	4.5	+26 14	18.0	42.3	17 25 06.6	30.9	55.1
48		α Ophiuchi	2	+12 41	37.0	59.3	17 28 21.5	43.8	6.1
49		κ Scorpii	3	—38 57	24.2	52.1	17 32 20.2	48.0	16.0
50		ϑ Ophiuchi	3	+ 4 38	42.2	4.1	17 36 25.8	47.5	9.3
51		γ Ophiuchi	4	+ 2 46	0.3	22.2	17 40 43.8	5.5	27.2

March 29.—Hazy. Error of collimation +0s 78; error of level —0s.64; no azimuthal error. ☽ ☌ A^1 Scorpii.
31.—Clear. Corrected level error; collimation +0s.44; no azimuthal error.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
14	05	16.48	+ .238			+0	45.32	—0.30	14	04	31.40	1
14	09	15.32	+ .129	+0	45.22		.32		14	08	30.13	2
14	11	22.18	+ .257				.32		14	10	37.12	3
14	15	43.90	+ .247				.32		14	14	58.83	4
14	19	44.32	+ ·397				.32		14	18	59.40	5
14	25	49.50	+ .121				.32		14	25	04.30	6
14	29	23.96	+ .251				.32		14	28	38.89	7
14	34	05.98	+ .147				.32		14	33	20.81	*8
14	38	53.16	+ .122		45.30		.31		14	38	07.97	9
14	42	56.76	+ .276		45.32		.31		14	42	11.73	*10
14	45	55.26	+ .319				.31		14	45	10.27	11
14	52	02.53	+ .722		44.22		.31		14	51	17.94	12
14	55	38.38	+ .353				.31		14	54	53.42	13
14	58	48.54	+ .280				.31		14	58	03.51	*14
15	01	09.50	+ .123				.31		15	00	24.31	15
15	04	01.36	+ .305				.31		15	03	16.35	16
15	09	18.56	+ .233	+0	45.39	+0	45.31	—0.30	15	08	33.48	17
14	42	56.16	+ .430	+0	44.85	+0	44.92	—0.41	14	42	11.67	*18
14	52	02.90	+ .998		44.81		.92		14	51	18.98	19
14	55	37.60	+ .544				.91		14	54	53.23	20
15	01	09.24	+ .174				.91		15	00	24.50	21
15	04	01.04	+ .468				.91		15	03	16.60	22
15	09	18.08	+ .353		45.00		.91		15	08	33.52	23
15	12	59.28	+ .448				.91		15	12	14.82	24
15	16	25.74	+ .362				.91		15	15	41.19	25
15	28	47.22	+ .173		44.98		.91		15	28	02.48	26
15	33	38.50	+ .488				.90		15	32	54.09	27
15	37	16.48	+ .207		44.87		.90		15	36	31.79	28
15	42	16.58	+ .555				.90		15	41	32.23	29
15	45	38.56	+ .535				.90		15	44	54.19	30
15	50	38.10	+1.405		45.37		.90		15	49	54.60	31
15	51	47.18	+ .507				.90		15	51	02.79	32
15	57	02.66	+ .470		44.94		.90		15	56	18.23	*33
16	01	21.00	+ .220				.90		16	00	36.32	*34
16	06	51.26	+ .306		44.81		.89		16	06	06.68	35
16	12	23.08	+ .555				.89		16	11	38.74	36
16	15	44.20	+ .187				.89		16	14	59.50	37
16	20	30.90	+ .568		44.96		.89		16	19	46.58	38
16	22	39.22	+ .405	+0	45.78	+0	44.89	—0.41	16	21	54.73	*39
16	54	59.94	+ .514			+0	43.99	—0.45	16	54	16.46	40
17	03	04.00	+3.277	+0	43.94		.99		17	02	23.29	41
17	06	24.40	+ .491				.98		17	05	40.91	*42
17	09	04.90	+1.078				.98		17	08	22.00	43
17	13	04.66	+ .489				.98		17	12	21.17	*44
17	17	29.64	+ .481				.98		17	16	46.14	45
17	20	45.60	+ .469				.98		17	20	02.09	46
17	25	06.58	+ .491				.98		17	24	23.09	47
17	28	21.56	+ .451	+0	43.95		.98		17	27	38.03	48
17	32	20.10	+ .565				.98		17	31	36.68	49
17	36	25.78	+ .441				.98		17	35	42.24	50
17	40	43.80	+ .440			+0	43.97	—0.45	17	40	00.27	51

No. 8. π Bootis double; smaller star of the 6th magnitude.
10, 14, 18, 34, 39, 42, 44. Two stars in the field of the instrument.
33. The companion to β Scorpii of the 6th magnitude.
42. A Ophiuchi, a close double star; each of the 6th magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	Mar. 31	Moon II	(20.1)	—25°56′	32.1	57.0	17 44 21.9	46.8	11.7
2	cont'd.	2050 A. S. C.	7	—15 47	14.6	37.0	17 47 59.5	22.0	44.6
3		b Sagittarii	5.6	—23 48	7.1	31.0	17 50 54.8	18.5	42.3
4		τ Ophiuchi	4.5	— 8 10	30.5	52.6	17 55 14.5	36.5	58.4
*5		p Ophiuchi	5	+ 2 32	30.3	52.2	17 58 14.0	35.7	57.2
6		ο Herculis	4	+28 45	18.5	43.2	18 02 08.0	32.6	57.4
7		μ^1 Sagittarii	3.4	—21 06	18.1	41.4	18 05 04.6	27.9	51.1
8		g Sagittarii	5.6	—27 05	6.8	31.2	18 08 55.6	19.9	44 3
9		ε Sagittarii	3	—34 27	34.3	0.6	18 14 27.0	53.3	19.5
10		λ Sagittarii	4	—25 30	10.8	34.8	18 18 58.8	22.9	47.0
11		δ Ursæ Min.	3	+86 35			18 23 46.0		
12	April 20	π Leonis	4.5	+ 8 48	25.3	47.3	9 52 09.3	31.2	53.2
13		l Sextantis	6	+ 0 10	47.2	8.9	10 22 30.5	52.2	34.0
14		m Ursæ Maj.	5	+57 54	54.5	35.6	10 25 16.5	57.5	38.2
15		ι Hyd. & Crat.	6	—15 32	6.5	29.1	10 28 51.5	14.1	36.5
16		Moon I	(10.1)	+ 5 30	52.7	15.1	10 31 37.3	59.7	21.9
17		34 Sextantis	6	+ 4 25	2.2	24.1	10 34 45.8	7.5	29.2
18		k Leonis	6	+15 02	36.1	58.5	10 38 21.0	43.5	5.9
*19		r Sextantis	6	— 8 04	56.3	18.3	10 42 40.2	2.2	24 2
20		b^3 Hyd. & Crat.	5.6	—19 17	17.5	40.6	10 46 03.6	26.6	49.7
21		1299 A. S. C.	5	—36 17	45.5	12.6	10 49 39.5	6.5	33.5
*22		d Leonis	5	+ 4 28	58.4	20.3	10 52 42.0	3.7	25.4
23		χ Leonis	5	+ 8 11	26.1	48.1	10 57 09.9	32.0	53.9
24		67 Leonis	6	+25 31	50.3	14.4	11 00 38.4	2.5	26.5
25		δ Leonis	3	+21 23	13.6	37 0	11 06 00.3	23.6	46.9
26		δ Hyd. & Crat.	3.4	—13 56	59.8	22.2	11 11 44.5	6.9	29.2
27	21	34 Sextantis	6	+ 4 25	0.1	21.7	10 34 43.5	5.3	27.2
28		k Leonis	6	+15 02	33.9	56.4	10 38 18.8	41.3	3.8
*29		r Sextantis	6	— 8 04	54.3	16.4	10 42 38.2	0.1	22.0
30		b^3 Hyd. & Crat.	5.6	—19 17	15.5	38.5	10 46 01.5	24.5	47.5
31		1299 A. S. C.	5	—36 17	43.6	10.5	10 49 37.5	4.5	31.4
*32		d Leonis	5	+ 4 28	56.4	18.2	10 52 39.9	1.6	23.5
33		χ Leonis	5	+ 8 11	24.1	46.0	10 57 07.8	29.7	51.5
34		67 Leonis	6	+25 31	48.5	12.6	11 00 36.5	0.5	24.5
35		δ Leonis	3	+21 23	11.6	35.1	11 05 58.3	21.5	45.0
*36		φ Leonis	5.6	— 2 47	10.2	32.2	11 08 53.3	15.5	37.2
37		δ Hyd. & Crat.	3.4	—13 56	57.6	20.2	11 11 42.6	5.0	27.2
38		λ Hyd. & Crat.	6	—17 55	2.3	25.2	11 15 48.0	10.8	33.5
*39		κ Hyd. & Crat.	6	—11 29	43.5	5.9	11 19 28.2	50.3	12.5
40		ε Leonis	5	— 2 08	47.0	8.9	11 22 30.7	52.3	14.0
41		Moon I	(11.1)	+ 1 02	6.2	28.5	11 25 50.7	12.8	35.1
42		υ Leonis	4.5	+ 0 03	24.3	46.0	11 29 07.7	29.4	57.0
43		γ Cephei	3	+76 45		28.0	11 33 08.2	37.3	12.0
44		ξ^1 Virginis	5.6	+ 9 09		2.2	11 37 24.2	46.3	8.2
*45		β Leonis	2.3	+15 27	30.6	53.5	11 41 15.9	38.4	1.0
46		β Virginis	3.4	+ 2 39		22.0	11 42 43.7	5.5	27.2
47		γ Ursæ Maj.	2	+54 34	32 6	10.0	11 45 47.5	24.9	2.3
48	22	υ Leonis	4.5	+ 0 03	22.5	44.2	11 29 05.8	27.5	49.2
*49		γ Cephei	3	+76 45		27.5	11 33 02.5	36.5	11.5
50		ξ^1 Virginis	5.6	+ 9 09			11 37 22.5	44.5	6.5

April 20.—Cirro-cumuli. Level and collimation adjusted.
21.—Cirri.
22.—Cirro-cumuli.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
17	44	21.90	+ .489			+0	43.97	−0.45	17	43	38.42	1
17	47	59.54	+ .457				.97		17	47	16.03	2
17	50	54.74	+ .481				.97		17	50	11.25	3
17	55	14.50	+ .444				.97		17	54	30.97	4
17	58	13.88	+ .440				.97		17	57	30.35	*5
18	02	07.94	+ .502				.97		18	01	24.47	6
18	05	04.62	+ .472	+0	44.00		.97		18	04	21.12	7
18	08	55.56	+ .494				.97		18	08	12.08	8
18	14	26.94	+ .534				.96		18	13	43.51	9
18	18	58.86	+ .487				.96		18	18	15.39	10
18	23	46.00	+7.383	+0	43.98	+0	43.96	−0.45	18	23	09.42	11
9	52	09.26	+ .345			+0	15.88	−2.15	9	51	53.72	12
10	22	30.56	+ .425				.83		10	22	15.15	13
10	25	16.46	− .416				.83		10	25	00.21	14
10	28	51.54	+ .574				.82		10	28	36.29	15
10	31	37.34	+ .394				.82		10	31	21.91	16
10	34	45.76	+ .386				.81		10	34	30.34	17
10	38	21.00	+ .286				.81		10	38	05.48	18
10	42	40.24	+ .525				.80		10	42	24.96	*19
10	46	03.60	+ .640				.80		10	45	48.44	20
10	49	39.52	+ .853				.79		10	49	24.58	21
10	52	41.96	+ .386				.79		10	52	26.56	*22
10	57	10.00	+ .367				.78		10	56	54.59	23
11	00	38.42	+ .183				.78		11	00	22.82	24
11	06	00.28	+ .220	+0	15.76		.77		11	05	44.73	25
11	11	44.52	+ .558	+0	15.56	+0	15.76	−2.15	11	11	29.32	26
10	34	43.56	+ .318			+0	13.66	−2.00	10	34	30.22	27
10	38	18.84	+ .236				.65		10	38	05.43	28
10	42	38.20	+ .413				.65		10	42	24.96	*29
10	46	01.50	+ .503				.64		10	45	48.36	30
10	49	37.50	+ .672				.64		10	49	24.58	31
10	52	39.92	+ .318				.63		10	52	26.61	*32
10	57	07.82	+ .289				.62		10	56	54.49	33
11	00	36.52	+ .144				.62		11	00	23.04	34
11	05	58.30	+ .181	+0	13.75		.61		11	05	44.87	35
11	08	53.78	+ .373				.61		11	08	40.54	*36
11	11	42.52	+ .460		13.46		.61		11	11	29.37	37
11	15	47.96	+ .493				.60		11	15	34.85	38
11	19	28.08	+ .440				.60		11	19	14.92	*39
11	22	30.58	+ .368				.59		11	22	17.86	40
11	25	50.66	+ .359				.59		11	25	37.43	41
11	29	07.68	+ .352				.58		11	28	54.45	42
11	33	02.78	+2.203		16.66		.58		23	32	51.40	*43
11	37	24.22	+ .281				.57		11	37	10.93	44
11	41	15.84	+ .231		13.31		.57		11	41	02.50	*45
11	42	43.73	+ .331				.56		11	42	30.50	46
11	45	47.46	− .261	+0	13.73	+0	13.56	−2.00	11	45	34.16	47
11	29	05.84	+ .251			+0	11.77	−1.50	11	28	54.32	48
11	33	02.14	+1.578	+0	12.32		.77		23	32	51.94	*49
11	37	22.50	+ .201			+0	11.76	−1.50	11	37	10.94	50

No. 5. *p* Ophiuchi double; the smaller star of the 6.7 magnitude.
19, 22, 29, 32, 36, 39, 45. Two stars in the field of the instrument.
43, 49. γ Cephei, sub-polo.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	April 22	β Leonis	2.3	+15°27′	29.0	51.6	11 41 14.2	36.7	59.3
2	cont'd.	β Virginis	3.4	+ 2 39		20.4	11 42 42.1	3.7	25.4
3		γ Ursæ Maj.	2	+54 34	30.5	8.2	11 45 45.5	22.9	0.4
4		Virginis	7	— 0 5-	59.7	21.5	11 51 43.2	4.9	26.5
5		1 Comæ Ber.	6.7	+22 59	6.0	29.5	11 53 52.9	16.5	40.0
6		1393 A. S. C.	7	— 2 15	25.3	47.2	11 58 08.8	30.5	52.2
7		r Virginis	6	+ 2 47	6.4	28.2	12 01 49.9	11.5	33.2
8		5 Comæ Ber.	6	+21 25	34.8	58.2	12 04 21.4	44.7	8.0
9		δ Ursæ Maj.	3	+57 54	29.2	10.1	12 07 50.9	31.9	13.0
10		η Virginis	3.4	+ 0 12	20.3	42.0	12 12 03.7	25.3	47.1
11		Moon I	(12.2)	— 7 31	35.1	57.6	12 20 20.2	42.5	5.1
12		q Virginis	5.6	— 8 35	8.1	30.2	12 25 52.1	14.2	36.1
13		d Hyd.& Crat	5.6	—26 16	46.4	10.5	12 29 34.5	58.6	23.0
*14		γ^1 Virginis	3	— 0 35			12 33 53.9	15.6	37.3
15		38 Virginis	6	+10 26	51.3	13.5	12 38 35.6	57.6	19.7
16		30 Comæ Ber.	6	+28 25	0.6	25.5	12 41 50.2	14.9	39.5
17		ψ Virginis	5.6	— 8 41	39.1	1.2	12 46 23.1	45.0	6.9
*18		α Ursæ Min.	2.3	+88 28		28.5	13 01 58.5		
19	23	c Comæ Ber.	5	+29 09	27.6	52.5	12 19 17.3	42.1	7.0
20		q Virginis	5.6	— 8 35	7.1	29.0	12 25 51.0	13.0	34.8
21		d Hyd.& Crat.	5.6	—26 16	45.3	9.4	12 29 33.6	57.7	21.9
22		γ^1 Virginis	3	— 0 35	9.2	31.0	12 33 52.7	14.4	36.1
23		ψ Virginis	5.6	— 8 41	37.9	59.8	12 46 21.8	43.9	45.7
24		r Comæ Ber.	5	+18 16	34.3	57.2	12 51 20.1	43.0	5.8
25		ε Virginis	3.4	+11 49	47.7	9.9	12 54 32.1	54.4	16.6
26		t Comæ Ber.	6	+22 00	5.8	29.2	12 58 52.5	16 0	39.4
*27		α Ursæ Min.	2.3	+88 28			13 01 59.2		
28		55 Virginis	6	—19 06	11.5	34.5	13 05 57.4	20.4	43.5
29		σ Virginis	5.6	+ 6 19	7.3	29.2	13 09 50.9	12.8	34.5
30		62 Virginis	7	—10 28	31.5	53.6	13 12 15.6	37.7	59.8
31		Moon I	(13.2)	—13 31	19.5		13 16 05.4	28.3	
32	25	ε Bootis	3	+27 44	27.5	51.8	14 38 16.5	41.1	5.5
*33		α^2 Libræ	3	—15 23	35.2	27.6	14 42 20.1	42.6	15.2
34		12 Libræ	6	—23 59	34.3	58.0	14 45 21.9	45.7	9.3
35		1690 A. S. C.	6.7	—20 40	40.0	3.2	14 48 26.5	49.8	13.0
36		β Ursæ Min.	3	+74 48		5.2	14 51 28.2	51.4	
37		20 Libræ	3.4	—24 39	13.5	37.5	14 55 01.5	25.4	49.4
*38		ν^2 Libræ	6.7	—15 52	26.5	49.1	14 58 11.6	34.1	56.6
39		b Bootis	6	+26 55	57.2	21.4	15 01 45.9	10.3	34.5
40		τ Libræ	7	—17 10	5.2	28.0	15 05 50.6	13.2	36.1
41		β Libræ	2.3	— 8 48	58.1	20.0	15 08 41.9	3.9	25.8
*42		o^1 Libræ	7	—14 58	38.3	0.9	15 12 23.2	45.6	8.2
43		Moon II	(15.3)	—22 34	54.7	19.2	15 15 43.2	7.5	32.0
44		ζ^1 Libræ	6	—16 09	47.5	10.2	15 19 32 5	55.1	17.8
45		ζ^4 Libræ	6	—16 19	26.3	48.8	15 24 11.5	34.0	56.5
46		α Cor. Bor.	2	+27 15	22.5	46.7	15 28 11.2	35.6	0.0
47		κ Libræ	5	—19 10	16.5	39.5	15 33 02.5	25 5	48.5
48		α Serpentis	2.3	+ 6 55	56.6	18.5	15 36 40.4	2.3	24.2
49		μ Serpentis	3.4	— 2 56	50.5	12.3	15 41 34.0	55.6	17.3
50		A^1 Scorpii	5	—24 51	31.6	55.3	15 44 19.5	43.4	7.3
51		π Scorpii	3.4	—25 39	41.5	5 5	15 49 29.5	53.6	17.5

April 23.—Cirro-cumuli. Observations interrupted by clouds:
25.—Clear. There were no errors of collimation or level before or subsequent to the observations.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
11	41	14.16	+ .164	+0	11.55	+0	11.75	—1.50	11	41	02.57	*1
11	42	42.03	+ .237				.75		11	42	30.52	2
11	45	45.50	— .186		11.82		.75		11	45	33.56	3
11	51	43.16	+ .263				.75		11	51	31.67	4
11	53	52.98	+ .119				.74		11	53	41.36	5
11	58	08.80	+ .263				.74		11	57	57.32	6
12	01	49.84	+ .236				.74		12	01	38.34	7
12	04	21.42	+ .128				.74		12	04	09.81	8
12	07	51.02	— .244				.73		12	07	39.05	9
12	12	03.72	+ .250				.73		12	11	52.24	10
12	20	20.10	+ .292				.72		12	20	08.67	11
12	25	52.14	+ .298				.71		12	25	40.73	12
12	29	34.60	+ .405				.71		12	29	23.29	13
12	33	53.88	+ .254				.71		12	33	42.42	*14
12	38	35.54	+ .194				.70		12	38	24.03	15
12	41	50.14	+ .082				.70		12	41	38.52	16
12	46	23.06	+ .298				.69		12	46	11.67	17
13	01	58.50	+11.924	+0	11.72	+0	11.67	—1.50	1	01	58.75	*18
12	19	17.30	+ .067			+0	10.53	—1.17	12	19	06.84	19
12	25	50.98	+ .260				.53		12	25	40.71	20
12	29	33.58	+ .354				.52		12	29	23.41	21
12	33	52.68	+ .223				.52		12	33	42.38	22
12	46	21.80	+ .261				.51		12	46	11.55	23
12	51	20.08	+ .129				.51		12	51	09.70	24
12	54	32.14	+ .165				.50		12	54	21.80	25
12	58	52.58	+ .109				.50		12	58	42.19	26
13	01	59.20	+10.433	+0	10.61		.50		1	01	59.13	*27
13	05	57.46	+ .314				.49		13	05	47.28	28
13	09	50.94	+ .189				.49		13	09	40.64	29
13	12	15.64	+ .270				.49		13	12	05.42	30
13	16	05.37	+ .285			+0	10.49	—1.17	13	15	55.16	31
14	38	16.48	+ .044	+0	08.15	+0	08.18	—1.27	14	38	08.34	32
14	42	20.14	+ .168		08.15		.17		14	42	12.14	*33
14	45	21.84	+ .195				.17		14	45	13.86	34
14	48	26.50	+ .184				.17		14	48	18.51	35
14	51	28.27	— .448		07.98		.17		14	51	19.65	36
14	55	01.46	+ .197				.16		14	54	53.50	37
14	58	11.58	+ .170				.16		14	58	03.59	*38
15	01	45.86	+ .046				.16		15	01	37.75	39
15	05	50.62	+ .174				.15		15	05	42.64	40
15	08	41.94	+ .150		08.20		.15		15	08	33.94	41
15	12	23.24	+ .167				.15		15	12	15.26	*42
15	15	43.32	+ .190				.14		15	15	35.37	43
15	19	32.64	+ .171				.14		15	19	24.67	44
15	24	11.42	+ .171				.14		15	24	03.45	45
15	28	11.20	+ .045		08.32		.13		15	28	03.11	46
15	33	02.50	+ .180				.13		15	32	54.55	47
15	36	40.40	+ .106	+0	08.18		.13		15	36	32.38	48
15	41	33.94	+ .134				.12		15	41	25.95	49
15	44	19.42	+ .198				.12		15	44	11.50	50
15	49	29.52	+ .200			+0	08.12	—1.27	15	49	21.60	51

Nos. 1, 33, 38, 42. Two stars in the field of the instrument.
14. Unable to separate γ Virginis with power 87.
18, 27. α Ursæ Minoris, sub-polo.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	April 25	3 Herculis	6	+ 4°53′	28.2	50.1	15 53 11.9	33.6	55.4
*2	cont'd.	β^1 Scorpii	2	−19 22	40.6	3.6	15 56 26.6	49.7	12.7
*3	26	g^2 Serpentis	6.7	+10 30	59.5	21.6	16 00 43.7	5.9	28.0
4		χ Scorpii	5	− 9 39	47.5	9.6	16 03 31.7	53.8	15.9
*5		δ Ophiuchi	3	− 3 17	30.2	52.1	16 06 13.9	35 6	57.3
6		σ Scorpii	4	−25 12	57.5	21.6	16 11 45.5	9.5	33.5
7		Moon II	(16.3)	−25 00	40.1	5.1	16 16 29.9	54.6	19.5
8		α Scorpii	1	−26 05	5.5	29 6	16 19 53.6	17.7	42.0
*9		η Draconis	3	+61 52		15.7	16 22 02.0	48.0	34.0
10		μ Herculis	4.5	+27 49	36.5	0.9	17 40 25.5	50.1	14.5
11		z Ophiuchi	6.7	−24 51	32.3	56.3	17 45 20.3	44.2	8.2
12		b Sagittarii	5.6	−23 48	31.0	54.6	17 50 18.3	42.1	5.9
13		γ^3 Sagittarii	4	−30 25	58.9	24.3	17 55 49.3	14.5	39.6
*14		S^2 Ophiuchi	3.4	+ 9 32	16.5	38.5	18 00 00.5	22.5	44.5
15		μ^1 Sagittarii	3.4	−21 06	41.6	5.0	18 04 28.4	51.7	15.0
*16		ε Sagittarii	3	−34 27	58.1	24.4	18 13 50.7	17.1	43.3
17		λ Sagittarii	4	−25 30	34.2	58.5	18 18 22.5	46.5	10.5
18		δ Ursæ Min.	3	+86 35			18 23 25.3		
*19		51 (Hev.) Cephei	5	+87 16			18 24 33.5		
*20	27	Venus 1st L.		+17 46	52.7	15.5	3 12 38.3	1.1	24.0
*21	28	Venus 1st L.		+18 08	48.0	10.9	3 17 33.8	56.7	19.7
*22		e^2 Ophiuchi	5	−23 50	5.6	29.5	17 21 53.2	16.9	40.5
23		α Ophiuchi	2	+12 41	57.5	19.7	17 27 42.0	4.3	26.6
24		κ Scorpii	3	−38 56	44.1	12.6	17 31 40.3	8.5	36.3
25		β Ophiuchi	3	+ 4 38	2.5	24.3	17 35 46.1	8.0	29.7
26		2042 A. S. C.	6	−31 39	10.2	36.0	17 39 01.4	26.8	52.4
27		87 Herculis	6	+25 41	42.3	6.5	17 42 30.7	54.7	19.9
28		2050 A. S. C.	7	−15 47	34.6	57.3	17 47 20.0	42.6	5.2
29		b Sagittarii	5	−23 48	27.5	51.3	17 50 15.1	39.0	2.7
30		τ Ophiuchi	5	− 8 11	51.0	12.9	17 54 34.7	56.5	18.5
*31		p Ophiuchi	4.5	+ 2 32	50.5	12.5	17 57 34.2	55.9	17.6
32		ο Herculis	4	+28 45	39.0	3.8	18 01 28.5	53.4	18.2
33		μ^1 Sagittarii	3.4	−21 06	38.5	1.6	18 04 24.8	48.0	11.3
34		g Sagittarii	5.6	−27 05	27.1	51.5	18 08 16.1	40.4	4.5
35		δ Sagittarii	3	−29 53	9.0	34.0	18 10 59.0	24.0	49.2
36		Moon II	(18.4)	−25 08	56.4	21.3	18 15 46 0	10.9	35.6
37		λ Sagittarii	4	−25 30	31.3	55.2	18 18 19.3	43.3	7.4
38		δ Ursæ Min.	3	+86 35			18 23 26.0		
*39		51 (Hev.) Cephei	5	+87 16			18 24 25.5		
40		1 Aquilæ	5	− 8 20	58.3	20.3	18 26 42.2	4.2	26.1
41		2154 A. S. C.	7	−21 10	47.4	10.8	18 29 34 0	57.3	20.5
42		ο Aquilæ	5.6	− 9 12	59.1	21.0	18 33 43.0	5.0	27.0
*43		4 Aquilæ	5.6	+ 1 54	13.5	35 3	18 36 57.0	18.8	40.5
44		30 Sagittarii	6.7	−22 20	39.4	3 0	18 41 26.4	49.9	13.3
45		σ Sagittarii	3	−26 29	45.2	9.5	18 45 33.8	58.1	22.5
46	29	λ Sagittarii	4	−25 30	29.6	53.7	18 18 17.6	41.6	5.7
47		δ Ursæ Min.	3	+86 35			18 23 24.5		
*48		51 (Hev.) Cephei	5	+87 16			18 24 22.5		
49		1 Aquilæ	5	− 8 20	56.6	18.6	18 26 40.5	2.5	24.5

April 26.--Cumuli. N. W. gale. Oiled escapement of clock without stopping it.
28.--Clear. After observing *p* Ophiuchi, moved the transit in azimuth; level undisturbed.
29.--Clear.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.	Clock error allowed.	Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m. s.*	*m. s.*	*s.*	*h.*	*m.*	*s.*	
15	53	11.84	+ .112		+0 08.11	—1.27	15	53	03.84	1
15	56	26 64	+ .180	+0 08.00	.11	—1.27	15	56	18.71	*2
16	00	43.74	+ .121		+0 06.75	—1.42	16	00	37.11	*3
16	03	31.70	+ .190		.75		16	03	25.14	4
16	06	13.82	+ .168	+0 06.62	.75		16	06	07.24	*5
16	11	45.52	+ .248		.74		16	11	39.03	6
16	16	29.84	+ .248		.74		16	16	23.35	7
16	19	53.68	+ .252	06.67	.74		16	19	47.19	8
16	22	01.90	— .207	06.89	.73		16	21	54.96	*9
17	40	25.50	+ .054		.75		17	40	18.90	10
17	45	20.26	+ .247		.65		17	45	13.86	11
17	50	18.38	+ .243		.64		17	50	11.98	12
17	55	49.32	+ .271		.64		17	55	42.95	13
18	00	00.50	+ .124		.63		17	59	53.99	*14
18	04	28.34	+ .232	06.67	.63		18	04	21.94	15
18	13	50.72	+ .291		.62		18	13	44.39	*16
18	18	22.44	+ .250		.62		18	18	16.07	17
18	23	25.30	—3.110	04.39	.61		18	23	15.58	18
18	24	33.50	+4.232	+0 05.18	+0 06.61	—1.42	6	24	31.12	*19
3	12	38.32	+ .080		+0 06.05	—1.46	3	12	32.70	*20
3	17	33.82	+ .073		+0 04.32	—1.56	3	17	29.92	*21
17	21	53.14	+ .194		03.35		17	21	49.98	*22
17	27	42.02	+ .097	+0 03.30	.35		17	27	38.77	23
17	31	40.36	+ .251		.34		17	31	37.27	24
17	35	46.12	+ .113		.34		17	35	42.89	25
17	39	01.36	+ .221		.33		17	38	58.25	26
17	42	30.82	+ .051		.33		17	42	27.54	27
17	47	19.94	+ .179		.33		17	47	16.79	28
17	50	15.12	+ .194		.32		17	50	11.99	29
17	54	34.72	+ .144		.32		17	54	31.54	30
17	57	34.14	+ .119		.31		17	57	30.95	*31
18	01	28.56	+ .090		.31		18	01	25.34	32
18	04	24.84	+ .418	03.27	.31		18	04	21.94	33
18	08	15.92	+ .205		.30		18	08	12.82	34
18	10	59.04	+ .486		.30		18	10	56.23	35
18	15	46.04	+ .447		.29		18	15	43.20	36
18	18	19.30	+ .450		.29		18	18	16.46	37
18	23	26.00	—5.698	01.95	.29		18	23	17.01	38
18	24	25.50	+7.618	+0 02.19	.28		6	24	29.84	*39
18	26	42.22	+ .334		.28		18	26	39 27	40
18	29	34.00	+ .420		.28		18	29	31.14	41
18	33	43.02	+ .339		.27		18	33	40.09	42
18	36	57.02	+ .270		.27		18	36	54.02	*43
18	41	26.40	+ .426		.26		18	41	23.57	44
18	45	33.82	+ .557		+0 03.26	—1.56	18	45	31.12	45
18	18	17.64	+ .470		+0 01.75	—1.60	18	18	16.36	46
18	23	24.50	—5.847	+0 00.08	.75		18	23	16.90	47
18	24	22.50	+7.957	—0 00.13	.75		6	24	28.71	*48
18	26	40.54	+ .348		+0 01.74	—1.60	18	26	39.15	49

No. 2. The companion to β Scorpii is of the 6th magnitude.
3, 5, 9, 14, 16, 22, 43. Two stars in the field of the instrument.
20. 21. Sidereal time of the semidiameter of Venus in passing meridian 0s 35.
19, 39, 48, 51. (Hev.) Cephei, sub-polo.
31. *p* Ophiuchi double; the smaller star of the 7th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V
					s.	s.	h. m. s.	s.	s
1	April 29	2154 A. S. C.	7	—21°10′	45.8	9.2	18 29 32.5	55.6	18.3
2	cont'd.	*o* Aquilæ	5.6	— 9 12	57.5	19.4	18 33 41.4	3.5	25.5
*3		4 Aquilæ	6	+ 1 54	11.8	33.8	18 36 55.5	17.3	39.0
4		30 Sagittarii	7	—22 20	37.7	1.5	18 41 24.9	48.8	11.7
5		σ Sagittarii	3	—26 29	43.6	8.0	18 45 32.3	56.6	20.3
*6		64 Serpentis	6	+ 2 20	40.2	2.0	18 49 23.7	45.6	7.3
7		48 Draconis	5.6	+57 36	47.5	28.2	18 54 08.6	49.0	29.5
8		ζ Aquilæ	3	+13 38	28.0	50.2	18 58 12.5	35.0	57.5
*9		Saturn		—22 05	26.5	50.0	19 02 13.5	37.0	0.5
*10		Saturn		—22 05	29.5	53.0	19 02 16.5	40.0	3.5
*11		*d* Sagittarii	5	—19 14	41.8	4.5	19 08 27.5	50.5	13.5
12		Moon II	(19.4)	—23 08	43.3	7.6	19 11 31.9	56.2	20.5
13		ρ¹ Sagittarii	5	—18 08			19 12 34.2	57.2	20.2
14		δ Aquilæ	3.4	+ 2 48	52.4	14.2	19 17 35.9	57.5	19.1
*15		*b* Vulpeculæ	4	+24 21	24.0	48.0	19 22 11.8	35.5	59.5
16		*h*² Sagittarii	4.5	—25 14	21.3	45.3	19 27 09.3	33.4	57.4
17		σ Aquilæ	6	+ 5 03	44.0	5.7	19 31 27.5	49.2	11.0
18		β Sagittæ	5	+17 07	15.5	38.3	19 34 01.0	23.7	46.5
19		Jupiter 1st L.		—21 39	28.8	52.2	19 37 15.7	39.1	2.0
20		Jupiter 2d L.		—21 39	31.5	55.0	19 37 18.5	41.8	5.0
21		α Aquilæ	1.2	+ 8 27	24.2	46.1	19 43 08.0	29.9	52.0
22		β Aquilæ	4	+ 6 01	53.2	15.0	19 47 36.8	58.5	20.4
*23		Mercury 1st L.		+ 9 32	32.0	54.1	1 48 16.2	38.3	0.3
*24	30	Venus 1st L.		+18 49	41.6	4.6	3 27 27.6	50.7	13.8
*25		*b* Vulpeculæ	4	+24 21	22.5	46.5	19 22 10.3	34.1	57.8
26		*h*² Sagittarii	4.5	—25 14	20.1	44.0	19 27 08.0	32.1	56.0
27		σ Aquilæ	5	+ 5 03	42.5	4.3	19 31 26.0	47.8	9.5
28		β Sagittæ	5	+17 07	14.0	36.5	19 33 59.4	22.2	44.8
29		Jupiter 1st L.		—21 39	35.1	58.5	19 37 21.8	45.4	8.5
30		Jupiter 2d L.		—21 39	38.1	1.5	19 37 24.8	48.3	11.5
31		α Aquilæ	1.2	+ 8 27	22.5	44.5	19 43 06.5	28.5	50.5
32		β Aquilæ	4	+ 6 01	51.5	13.5	19 47 35.4	57.2	19.0
33		γ Sagittæ	4.5	+19 04	0.1	23.0	19 51 45.9	8.8	32.0
34		*g* Vulpeculæ	5	+27 19	49.0	13.3	19 54 37.6	1.9	26.4
35		Moon II	(20.5)	—19 58	5.1	28.7	20 02 52.4	16.1	49.8
36		α² Capricorni	3	—13 02	35.0	57.2	20 09 19.2	41.3	3.6
*37	May 1	Venus 1st L.		+19 10	40.3	3.5	3 32 26.6	49.7	12.8
*38	14	Mercury 1st L.		+20 32	7.1	30.1	3 42 53.9	17.3	40.5
*39		Venus 1st L.		+22 44	7.6	31.5	4 38 55.2	18.8	42.3
40	15	δ Hyd. & Crat.	3.4	—13 56	30.3	52.6	11 11 14.9	37.3	59.5
*41		γ Cephei	3	+76 45	28.5	2.8	11 32 37.6	12.0	47.0
42		β Leonis	2.3	+15 27	3.0	25.6	11 40 48.2	10.7	33.3
43		γ Ursæ Maj.	2	+54 34	4.3	41.6	11 46 19.0	56.4	34.0
*44	16	Mercury 1st L.		+21 45	57.2	20.7	4 00 44.1	7.6	31.1
*45		Venus 1st L.		+23 07	35.6	59.2	4 49 22.8	46.5	10.2
46		α Ursæ Maj.	1.2	+62 36	10.6	58.0	10 53 45.2	32.4	19.5
47		χ¹ Hyd. & Crat.	5	—26 26	42.3	6.5	10 57 30.7	54.9	19.1
48		10 Hyd. & Crat.	5	—27 13	4.2	28.5	11 00 52.9	17.2	41.5

April 29.—After observing ρ¹ Sagittarii, moved the transit in azimuth; the level remained undisturbed.
30.—Cirrus.
May 1.—At 4*h*. stopped clock, and shortened the pendulum 0.7 division.
14, 15, 16.—The adjustments in level and collimation were examined each day.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
18	29	32.38	+ .440			+0	01.74	—1.50	18	29	31.08	1
18	33	41.46	+ .353				.74		18	33	40.07	2
18	36	55.48	+ .283				.73		18	36	54.03	*3
18	41	24.82	+ .445				.73		18	41	23.53	4
18	45	32.28	+ .476				.73		18	45	31.03	5
18	49	23.76	+ .280				.72		18	49	22.32	*6
18	54	08.56	— .281				.72		18	54	06.56	7
18	58	12.64	+ .206	+0	01.67		.71		18	58	11.14	8
19	02	13.50	+ .443				.71		19	02	13.73 {	*9
19	02	16.50	+ .443				.71					*10
19	08	27.46	+ .423				.70		19	08	26.18	*11
19	11	31.90	+ .451				.70		19	11	30.65	12
19	12	34.40	+ .415				.70		19	12	33.11	13
19	17	35.82	+ .147		01.83		.69		19	17	34.28	14
19	22	11.76	+ .069				.69		19	22	10.14	*15
19	27	09.34	+ .249				.68		19	27	07.91	16
19	31	27.48	+ .140				.68		19	31	25.94	17
19	34	01.00	+ .079				.68		19	33	59.40	18
19	37	15.56	+ .188				.67		19	37	14.08	19
19	37	18.36	+ .188				.67		19	37	16.88	20
19	43	08.04	+ .128		01.63		.67		19	43	06.50	21
19	47	36.78	+ .136	+0	01.69		.66		19	47	35.26	22
1	48	16.18	+ .125			+0	01.29	—1.50	1	48	15.19	*23
3	27	27.66	+ .090			+0	01.21	—1.46	3	27	26.89	*24
19	22	10.24	+ .069				00.24		19	22	10.07	*25
19	27	08.04	+ .249				.24		19	27	08.05	26
19	31	26.02	+ .140				.24		19	31	25.92	27
19	33	59.38	+ .096				.23		19	33	59.25	28
19	37	21.86	+ .234				.23		19	37	21.86	29
19	37	24.84	+ .234				.23		19	37	24.84	30
19	43	06.50	+ .128	+0	00.07		.22		19	43	06.41	31
19	47	35.32	+ .136		00.20		.22		19	47	35.24	32
19	51	45 96	+ .090				.22		19	51	45.83	33
19	54	37.64	+ .055				.21		19	54	37.48	34
20	03	52.42	+ .228				.21		20	03	52.44	35
20	09	19.26	+ .202	+0	00.22	+0	00.21	—1.46	20	09	19.25	36
3	32	26.58	+ .089			—0	00.26	—1.49	3	32	27.28	*37
3	42	53.78	+ .129			—0	13.47	—0.50	3	43	07.55	*38
4	38	55.08	+ .116			—0	13.49	—0.50	4	39	09.05	*39
11	11	14.92	+ .316	—0	14.05	—0	14.15	—0.50	11	11	29.39	40
11	32	37.58	+1.514		14.23		.15		23	32	53.24	*41
11	40	48.16	+ .159		14.24		.15		11	41	02.47	42
11	45	19.06	— .179	—0	14.09	—0	14.15	—0.50	11	45	33.03	43
4	00	44.14	+ .196			—0	14.46	—0.47	4	00	58.97	*44
4	49	22.86	+ .184				.48		4	49	37.89	*45
10	53	45.14	— .543	—0	14.57		.59		10	53	59.19	46
10	57	30.76	+ .632				.59		10	57	45.92	47
11	00	52.86	+ .640			—0	14.59	—0.47	11	01	08.09	48

Nos. 3, 6, 11, 15, 25. Two stars in the field of the instrument.
9, 10. The east and west points of the ring were observed.
23. 38, 44. Sidereal time semidiameter Mercury passing meridian 0s.17.
24, 37, 39. 45. Sidereal time semidiameter Venus passing meridian, respectively, 0s.35, 0s.35, 0s.36, 0s.37.
41. γ Cephei, sub-polo.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 16 cont'd.	δ Leonis	3	+21°23′	43.1	6.2	11 05 29.6	53.0	16.4
2		φ Leonis	5	— 2 47	41.5	3.4	11 08 25.2	46.9	9.5
3		δ Hyd. & Crat.	3.4	—13 56	29.5	51.8	11 11 14.1	36.4	58.7
4		λ Hyd. & Crat.	6	—17 55	34.0	56.5	11 15 19.5	42.4	5.2
5		κ Hyd. & Crat.	6	—11 29	15.5	37.5	11 18 59.5	21.6	44.0
6		ε Leonis	4.5	— 2 08	18.7	40.5	11 22 02.2	24.0	45.8
7		ξ Hyd. & Crat.	4	—30 59	11.4	36.6	11 25 01.9	27.3	52.5
8		θ Hyd. & Crat.	4	— 8 55	44.0	5.9	11 28 27.9	49.9	11.8
*9		γ Cephei	3	+76 45		1.5	11 32 36.5	11.2	
10		ξ^1 Virginis	5	+ 9 08	11.5	33.6	11 36 55.6	17.6	39.7
11		β Leonis	2.3	+15 27	2.6	25.0	11 40 47.4	9.8	32.3
12		γ Ursæ Maj.	2	+54 34	3.5	41.5	11 45 18.5	56.5	33.5
13	17	ο Leonis	4	+10 37	44.5	6.5	9 32 28.5	50.5	12.6
14		ε Leonis	3	+24 30	50.8	14.5	9 36 38.4	2.3	26.2
15		υ Ursæ Maj.	4.5	+59 47	4.0	47.0	9 36 30.0	13.3	56.3
16		μ Leonis	3	+26 45	43.5	7.7	9 43 32.0	56.3	20.6
17		α Leonis	1	+12 44	58.6	20.8	9 59 42.9	5.7	27.4
18	18	α Ursæ Maj.	1.2	+62 36	9.2	56.3	10 53 43.3	30.5	17.5
19		χ^1 Hyd. & Crat.	5	—26 26	40.2	4.3	10 57 28.4	52.5	16.6
20		δ Leonis	3	+21 23	40.7	4.3	11 05 27.5	50.7	14.2
21		Moon I	(8.5)	+ 7 17			11 06 27.8	50.0	12.1
22		δ Hyd. & Crat.	3.4	—13 56	27.0	49.3	11 11 11.6	34.0	56.5
23		σ Leonis	4	+ 6 56		22.8	11 12 44.5	6.3	28.2
24		λ Hyd. & Crat.	6	—17 55	31.5	54.5	11 15 17.3	40.1	2.9
25		κ Hyd. & Crat.	6	—11 30			11 18 57.5	19.5	41.5
26		ε Leonis	4.5	— 2 08	16.5	33.2	11 22 00.0	21.6	43.3
27		ξ Hyd. & Crat.	4	—31 00	8.9	34.1	11 24 59.5	24.8	50.1
28		υ Leonis	4.5	+ 0 03	53.5	15.2	11 28 37.0	58.6	20.4
*29		γ Cephei	3	+76 45		58.5	11 32 32.9	7.2	
*30		β Leonis	2.3	+15 27	0.1	22.5	11 40 45.2	7.5	30.2
31		γ Ursæ Maj.	2	+54 34	1.3	39.1	11 45 16.6	54.0	31.5
*32	23	Mercury 1st L.		+24 43			5 02 09.3	33.3	57.4
*33		Venus 1st L.		+24 09	52.6	16.5	5 26 40.5	4.4	28.3
34		α Bootis	1	+20 00	41.0	4.0	14 08 27.0	50.0	13.3
35		ρ Bootis	4	+31 04	10.5	35.6	14 25 01.2	26.3	51.7
*36		π Bootis	4	+17 06	32.4	55.1	14 33 17.7	40.3	3.3
37		ε Bootis	3	+27 44	16.0	40.5	14 38 05.1	29.6	54.2
*38		α^2 Libræ	3	—15 23	23.5	46.1	14 42 08.5	31.0	53.5
39		1690 A. S. C.	6	—20 40	28.5	51.8	14 48 15.1	38.2	1.5
40		β Ursæ Min.	3	+74 48		56.0	14 51 18.0	41.0	
41		20 Libræ	3.4	—24 39	2.5	26.4	14 54 50.2	14.0	37.8
42		c Bootis	5	+25 30	33.5	58.0	15 00 21.8	46.2	10.0
43		ι^1 Libræ	5.6	—19 11	27.5	50.5	15 03 13.5	36.5	59.5
44		β Libræ	2.3	— 8 48	46.7	8.6	15 08 30.5	52.5	
45		α Cor. Bor.	2	+27 15			15 28 00.2	24.5	
46	25	ε Ursæ Min.	4	+82 16		48.5	17 02 31.0		
*47		A Ophiuchi	6	—26 22	51.6	16.0	17 05 40.1	4.3	28.5
*48		α Herculis	3.4	+14 34		5.6	17 07 28.2	50.5	13.1
49		θ Ophiuchi	3.4	—24 50	32.6	56.5	17 12 20.4	44.3	8.3

May 17.—Cirro-cumulus.

23.—Cirro-cumulus. Stopped the clock, and shortened the pendulum 0.3 divisions. Collimation and level adjusted. Time of semidiameter Mercury in passing meridian 0s.20; Venus 0s.38.

25.—Collimation and level adjusted.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
11	05	29.66	+ .201	—0	14.60	—0	14.59	—0.47	11	05	44.45	1
11	08	26.10	+ .415				.59		11	08	40.10	2
11	11	14.10	+ .528		14.67		.59		11	11	29.21	3
11	15	19.52	+ .548				.59		11	15	34.66	4
11	18	59.62	+ .516				.59		11	19	14.73	5
11	22	02.24	+ .409				.59		11	22	17.24	6
11	25	01.94	+ .682				.59		11	25	17.21	7
11	28	27.90	+ .467				.59		11	28	42.96	8
11	32	36.40	+2.451		14 57		.59		23	32	53.44	*9
11	36	55.60	+ .313				.58		11	37	10.49	10
11	40	47.42	+ .257		14.88		.58		11	41	02.26	11
11	45	18.70	— .290	—0	14.56	—0	14.58	—0.47	11	45	32.99	12
9	32	28.52	+ .495			—0	15.92	—1.10	9	32	44.93	13
9	36	38.44	+ .281	—0	15.91		.92		9	36	54.64	14
9	39	30.12	— .729				.92		9	39	45.31	15
9	43	32.02	+ .242				.91		9	43	48.17	16
9	59	43.08	+ .465	—0	15.87	—0	15.90	—1.10	9	59	59.44	17
10	53	43.36	— .900	—0	16.58	—0	16.78	—0.79	10	53	59.24	18
10	57	28.40	+1.045				.78		10	57	46.22	19
11	05	27.48	+ .332		16.63		.78		11	05	44.59	20
11	06	27.64	+ .545				.78		11	06	44.96	21
11	11	11.68	+ .845		16.76		.78		11	11	29.30	22
11	12	44.51	+ .548				.78		11	13	01.84	23
11	15	17.26	+ .907				.77		11	15	34.94	24
11	18	57.34	+ .809				.77		11	19	14.92	25
11	21	59.92	+ .676				.77		11	22	17.37	26
11	24	59.48	+1.128				.77		11	25	17.38	27
11	28	36.94	+ .647				.77		11	28	54.36	28
11	32	32.87	+4.050		16.74		.77		23	32	53.69	*29
11	40	45.10	+ .425		17.02		.76		11	41	02.28	*30
11	45	16.50	— .480	—0	16.90	—0	16.76	—0.79	11	45	32.78	31
5	02	09.30	+ .227			—0	03.20	+0.25	5	02	12.93	*32
5	26	40.46	+ .233				.19		5	26	44.26	*33
14	08	27.06	+ .290	—0	03.24		.10		14	08	30.45	34
14	25	01.06	+ .134				.10		14	25	04.29	35
14	33	17.76	+ .328				.10		14	33	21.19	*36
14	38	05.08	+ .183		03.23		.10		14	38	08.36	37
14	42	08.52	+ .706		03.16		.10		14	42	12.33	*38
14	48	15.02	+ .774				.10		14	48	18.89	39
14	51	18.33	—1.880		03.10		.10		14	51	19.55	40
14	54	50.18	+ .827				.09		14	54	54.10	41
15	00	21.90	+ .215				.09		15	00	25.20	42
15	03	13.50	+ .754				.09		15	03	17.34	43
15	08	30.57	+ .628		03.00		.09		15	08	34.29	44
15	28	00.16	+ .180	—0	02.84	—0	03.09	+0.25	15	28	03.43	45
17	02	30.53	—4.197	—0	01.43	—0	01.44	+0.28	17	02	27.77	46
17	05	40.10	+ .831				.44		17	05	42.37	*47
17	07	28.15	+ .349	—0	01.51		.44		17	07	29.94	*48
17	12	20.42	+ .810			—0	01.44	+0.28	17	12	22.67	49

Nos. 9, 29. γ Cephei, sub polo.
30, 38. Two stars in the field of the instrument.
36. π Bootis double; smaller star of the 6th magnitude.
47. λ Ophiuchi double; equal. Observed the preceding star.
48. The companion to α Herculis is of the 6th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	May 25	*b* Ophiuchi	5.6	−24°01′	57.6	21.5	17 16 45.2	8.8	35.
2	cont'd.	2003 A. S. C.	6.7	+20 13	15.5	38.5	17 20 01.5	24.5	47.
3		*h* Ophiuchi	6.7	+ 2 51	44.2	5.8	17 23 27.5	49.3	11.
4		α Ophiuchi	2	+12 41	53.1	15.3	17 27 37.5	59.7	22.
5		κ Scorpii	3	−38 56	40.2	8.0	17 31 35.8	3.6	31.
6		β Ophiuchi	3	+ 4 38	58.0	19.7	17 35 41.5	3.3	25
7		2042 A. S. C.	5.6	−31 39		31.2	17 38 56.8	22.3	47.
8		87 Herculis	5.6	+25 41	38.1	2.2	17 42 26.3	50.4	14.
9		*z* Ophiuchi	6.7	−24 51	24.5	48.5	17 45 12.5	36.4	0.
10		Moon II	(15.8)	−25 30	46.3	11.4	17 49 36.3	1.2	26.
11		E Herculis	5	+16 46	17.5	40.2	17 53 03.0	25.8	48.
*12		*p* Ophiuchi	4.5	+ 2 32	46.1	7.8	17 57 29.5	51.3	13.1
13		ο Herculis	4.5	+28 45	34.5	59.3	18 01 24.2	49.0	13.
14		μ¹ Sagittarii	3.4	−21 06	34.0	57.7	18 04 21.4	43.8	7.
*15		G Herculis	5.6	+24 23	54.5	18.5	18 12 42.3	6.0	29.8
16		λ Sagittarii	4	−25 30	26.8	50.6	18 18 14.8	38.9	3.0
*17		*b* Draconis	5	+58 43	14.6	56.5	18 21 38.4	20.2	2.0
18	27	σ Sagittarii	3	−26 29	42.2	6.5	18 45 30.6	54.8	19.2
*19		ε Aquilæ	3.4	+14 51	44.5	7.2	18 52 29.8	52.0	14.9
*20		ο Sagittarii	4.5	−21 58	28.5	52.0	18 55 15.4	38.8	2.2
*21		Saturn 1st L.		−22 12	38.3	1.8	18 58 25.3	48.7	12.1
22		π Sagittarii	4.5	−21 16	38.0	1.3	19 00 24.4	47.5	11.0
23		B Aquilæ	6	− 8 12	24.6	46.7	19 04 08.7	30.7	52.6
*24		*d* Sagittarii	5.6	−19 14	39.7	2.7	19 08 25.7	48.7	11.7
25		ρ¹ Sagittarii	5	−18 08	47.2	10.0	19 12 32.8	55.6	18.4
26		δ Aquilæ	3.4	+ 2 48	50.5	12.5	19 17 34.2	56.0	17.7
27		κ Aquilæ	4	− 7 22	41.7	3.6	19 28 25.6	47.5	9.4
*28		σ Aquilæ	5	+ 5 03	42.3	4.0	19 31 25.8	47.6	9.4
*29		Jupiter 1st L.		−21 56	8.4	31.7	19 35 55.1	18.5	41.9
30		γ Aquilæ	3	+10 14	2.8	24.9	19 38 46.9	9.0	31.1
31		Moon II	(17.9)	−21 12	53.3	17.0	19 41 40.7	4.8	28.6
32		57 Sagittarii	6	−19 26			19 43 03.1	26.0	49.2
33		β Aquilæ	4	+ 6 01	51.5	13.4	19 47 35.2	57.0	18.7
*34		γ Sagittæ	4.5	+19 04	0.0	22.8	19 51 45.8	8.8	31.7
35		*g* Vulpeculæ	5.6	+27 19	48.6	13.2	19 54 37.7	2.2	26.7
36		η Sagittæ	6	+19 32	25.1	48.0	19 58 10.9	34.0	57.0
37		ρ Draconis	5	+67 25	14.3	10.5	20 02 07.2	3.5	0.0
38		ρ Aquilæ	5	+14 43	14.8	37.3	20 06 59.6	22.0	44.5
*39		α² Capricorni	3	−13 02	34 5	56.5	20 09 18.9	41.4	3.5
*40		κ Cephei	4.5	+77 14		29.5	20 14 07.3	45.1	
41		λ Ursæ Min.	6	+88 50			20 19 59.0		
42	31	β Orionis	1	− 8 23	14.3	36.5	5 06 58.5	20.5	42.4
43		α Orionis	1	+ 7 22	55.2	17.3	5 46 39.1	1.0	23.0
*44		Mercury	Centre	+25 36	48.5	12.7	6 03 37.0	1.3	25.5
*45		Venus 1st L.		+24 38	45.8	9.8	6 09 33.8	57.8	21.6
46		α Canis Maj.	1	−16 30	27.2	49.9	6 38 12.5	35.2	57.7
47	June 1	α Orionis	1	+ 7 22	55.7	17.6	5 46 39.5	1.4	23.2
*48		Mercury 1st L.		+25 35	33.6	57.7	6 10 21.9	46.2	10.4
*49		Venus 1st L.		+24 39	7.5	31.5	6 14 55.4	19.4	43.3
50		α Canis Maj.	1	−16 30	27.4	50.1	6 38 12.7	35.5	58.2

May 27 —Clear. Time of Saturn's semidiameter passing meridian 0s.62; Jupiter 1s.62.
31.—Collimation and level adjusted. Venus semidiameter passing meridian 0s.40.
June 1.—No error of level or collimation. Mercury time of semidiameter passing meridian 0s.23; Venus 0s.40.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
17	16	45.12	+ .799			—0	01.44	+0.28	17	16	47.36	1
17	20	01.50	+ .279				.44		17	20	03.22	2
17	23	27.58	+ .483				.44		17	23	29.50	3
17	27	37.52	+ .371	—0	01.45		.44		17	27	39.33	4
17	31	35.82	+1.030				.44		17	31	38.29	5
17	35	41.52	+ .463				.44		17	35	43.42	6
17	38	56.75	+ .908				.44		17	38	59.10	7
17	42	26.30	+ .207				.44		17	42	27.95	8
17	45	12.42	+ .810				.44		17	45	14.67	9
17	49	36.24	+ .819				.44		17	49	38.50	10
17	53	03.00	+ .323				.43		17	53	04.75	11
17	57	29.56	+ .487				.43		17	57	31.48	*12
18	01	24.16	+ .165				.43		18	01	25.75	13
18	04	20.80	+ .761	—0	01.10		.43		18	04	22.99	14
18	12	42.22	+ .226				.43		18	12	43.88	*15
18	18	14.82	+ .819				.43		18	18	17.07	16
18	21	38.34	— .535			—0	01.43	+0.28	18	21	39.24	*17
18	45	30.66	+ .203			—0	00.87	+0.35	18	45	31.73	18
18	52	29.68	+ .084				.87		18	52	30.63	*19
18	55	15.38	+ .189				.87		18	55	16.44	*20
18	58	25.24	+ .190				.87		18	58	26.92	*21
19	00	24.44	+ .187				.86		19	00	25.49	22
19	04	08.66	+ .148				.86		19	04	09.67	23
19	08	25.70	+ .180				.86		19	08	26.74	*24
19	12	32.80	+ .177				.86		19	12	33.84	25
19	17	34.18	+ .117	—0	00.63		.86		19	17	35.16	26
19	28	25.56	+ .147				.86		19	28	26.57	27
19	31	25.82	+ .112				.86		19	31	26.79	*28
19	35	55.12	+ .189				.86		19	35	57.79	*29
19	38	46.94	+ .098		00.70		.85		19	38	47.89	30
19	41	40.88	+ .187				.85		19	41	41.92	31
19	43	03.10	+ .181				.85		19	43	04.13	32
19	47	35.16	+ .109		00.77		.85		19	47	36.12	33
19	51	45.82	+ .072				.85		19	51	46.74	*34
19	54	37.64	+ .045				.85		19	54	38.53	35
19	58	11.00	+ .107				.85		19	58	11.96	36
20	02	07.10	— .249				.85		20	02	07.70	37
20	06	59.64	+ .084				.85		20	07	00.59	38
20	09	18.96	+ .163		00.99		.85		20	09	19.97	*39
20	14	07.30	— .561				.85		20	14	07.59	*40
20	19	59.00	—7.509	—0	00.99	—0	00.84	+0.35	20	19	52.33	41
5	06	58.44	+ .483	+0	01.38	+0	01.28	+0.33	5	06	57.64	42
5	46	39.12	+ .343		01.28		.28		5	46	38.18	43
6	03	37.00	+ .166				.29		6	03	35.88	*44
6	09	33.76	+ .176				.29		6	09	32.65	*45
6	38	12.50	+ .558	+0	01.21	+0	01.29	+0.33	6	38	11.77	46
5	46	39.48	+ .370	+0	01.66	+0	01.63	+0.31	5	46	38.22	47
6	10	21.96	+ .179				.63		6	10	20.73	*48
6	14	55.42	+ .189				.64		6	14	54.37	*49
6	38	12.78	+ .601	+0	01.59	+0	01.64	+0.34	6	38	11.74	50

No. 12. ρ Ophiuchi double; the smaller star of the 6.7 magnitude.
15, 17, 19, 20, 24, 34, 39, 40. Two stars in the field of the instrument.
28. Cirrus. Observation uncertain.
40. κ Cephei double; the smaller star of the 9th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 5	ι^1 Libræ	5.6	—19°11′	32.4	55.5	15 03 18.3	41.3	4.3
2		β Libræ	2.3	— 8 48	51.5	13.5	15 08 35.5	57.5	19.5
3		α Cor. Bor.	2	+27 15	16.0	40.5	15 28 05.0	29.4	54.0
4		α Serpentis	2.3	+ 6 55	50.5	12.4	15 36 34.2	56.1	17.9
5		b Scorpii	5	—25 16	46.5	10.5	15 41 34.5	58.5	22.5
6		A^1 Scorpii	5	—24 51	25.5	49.5	15 44 13.4	37.3	1.2
7		ζ Ursæ Min.	4	+78 17	24.0	11.3	15 49 58.0	45.3	31.3
*8		β^1 Scorpii	2	—19 22	34.6	57.5	15 56 20.5	43.5	6.6
9		α Scorpii	1	—26 05	0.8	25.0	16 19 49.1	13.2	37.3
*10		η Draconis	3	+61 52		11.8	16 21 57.8	43.7	
11	11	ε Bootis	3	+27 44	20.6	45.3	14 38 09.8	34.2	58.8
*12		α^2 Libræ	3	—15 23	28.3	50.8	14 42 13.3	35.9	58.5
13		β Ursæ Min.	3	+74 48	35.5	58.5	14 51 20.8	44.5	7.0
14		β Libræ	2.3	— 8 48	51.2	13.1	15 08 35.0	57.0	19.0
15		α Cor. Bor.	2	+27 15	15.3	39.8	15 28 04.3	28.6	53.2
16		α Serpentis	2.3	+ 6 55	50.0	11.9	15 36 33.8	55.6	17.5
17		b Scorpii	5	—25 16	45.8	10.0	15 41 33.9	58.0	21.9
18		A^1 Scorpii	5	—24 51	25.0	49.0	15 44 12.9	36.9	0.7
19		ζ Ursæ Min.	4	+78 17	24.5	11.5	15 49 58.8	44.5	30.5
*20		β^1 Scorpii	2	—19 22	34.3	57.3	15 56 20.3	43.2	6.2
21		δ Ophiuchi	3	— 3 17	25.0	46.8	16 06 08.6	30.3	52.0
22		α Scorpii	1	—26 05	0.4	24.4	16 19 48.5	12.6	37.0
*23		η Draconis	3	+61 52		11.5	16 21 57.3	43.5	
24	12	α Canis Maj.	1	—16 30	27.5	50.2	6 38 12.8	35.3	57.9
*25		Mercury 1st L.		+23 32	38.5	2.4	7 08 26.1	49.8	13.4
*26		Venus 1st L.		+23 56	42.0	5.8	7 13 29 5	53.3	17.2
27		α Canis Min.	1.2	+ 5 38	20.2	42.1	7 31 03.9	25.7	47.3
28		β Geminorum	2	+28 24	51.8	16.5	7 35 41.1	5.7	30.5
29	18	x Virginis	5.6	—17 21	36.3	59.5	13 41 22.5	45.7	8.8
30		κ Virginis	4	— 9 32	49.3	11.3	14 04 33.2	55.2	17.1
31		α Bootis	1	+20 00	45.6	8.8	14 08 32.0	55.2	18.3
32		λ Virginis	5	—12 39	54.3	16.5	14 10 38.6	0.9	23.2
33		7 Hydræ con.	6	—27 01	16.6	40 8	14 14 05.2	29.7	54.0
34		8 Hydræ con.	6	—28 47	11.5	36.4	14 19 01.3	25.8	50.5
35		Moon I	(10.1)	—19 43	22.3	46.0	14 26 09.8	33.5	57.2
36		1651 A. S. C.	6.7	—11 38	56.3	18.5	14 28 40.6	2.7	25.0
*37		π Bootis	4	+17 06	37.5	0.8	14 33 22.8	45.5	8.3
38		ε Bootis	3	+27 44	21.0	45 5	14 38 10.0	34.5	59.0
*39		α^2 Libræ	3	—15 23	28.5	51.1	14 42 13.6	36.2	58.6
*40		1690 A. S. C.	6	—20 40	33.7	57.2	14 48 20.2	43.2	6.5
41		β Ursæ Min.	3	+74 48		58.5	14 51 20.5	43.8	
42		20 Libræ	3.4	—24 39	7.5	31.5	14 54 55.4	19.3	43.1
*43		ν^2 Libræ	6.7	—15 52	20.3	42.3	14 58 05.8	28.0	50.5
44	19	b Bootis	6	+26 55	51.4	15.7	15 01 40.0	4.4	28.8
45		β Libræ	2.3	— 8 48	52.2	14.2	15 08 36.2	58.2	20.2
46		o^1 Libræ	7	—14 58	32.5	55.1	15 12 17.5	40.0	2.5
47		ε Libræ	5.6	— 9 45	0.0	22.0	15 15 44.1	6.0	28.0
48		ζ^1 Libræ	6	—16 10	41.6	4.3	15 19 26.4	49.4	12.2
49		Moon I	(11.2)	—23 09	21.6	46.0	15 24 10.3	34.8	59.2

June 5.—No error of level or collimation.
11.—Clear. No error of level or collimation. ☽ ☌ d^2 Cancri.
12.—Sidereal time semidiameter of Mercury passing the meridian 0s.30; Venus 0s.41. ☽ ☌ — Leonis.
18.—Cumulo-stratus. No error level or collimation.
19.—Cumuli. Examined adjustments. Collimation —0s.40; azimuth +0s.60.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
15	03	18.30	+ .725			+0	01.89	+0.10	15	03	17.13	1
15	08	35.50	+ .561	+0	01.82		.89		15	08	34.17	2
15	28	04.98	+ .169		01.94		.89		15	28	03.26	3
15	36	34.22	+ .399		01.90		.89		15	36	32.73	4
15	41	34.50	+ .745				.89		15	41	33.35	5
15	44	13.38	+ .741				.89		15	44	12.23	6
15	49	57.98	—2.365		00.15		.89		15	49	53.73	7
15	56	20.54	+ .675		01.83		.89		15	56	19.32	*8
16	19	49.08	+ .756		01.93		.89		16	19	47.95	9
16	21	57.77	— .636	+0	01.91	+0	01.89	+0.10	16	21	55.24	*10
14	38	09.74	+ .117	+0	01.42	+0	01.28	+0.05	14	38	08.58	11
14	42	13.36	+ .428		01.36		.28		14	42	12.51	*12
14	51	21.26	—1.163		01.31		.28		14	51	18.82	13
15	08	35.06	+ .389		01.19		.28		15	08	34.17	14
15	28	04.24	+ .118		01.15		.28		15	28	03.08	15
15	36	33.76	+ .277		01.30		.28		15	36	32.76	16
15	41	33.92	+ .517				.28		15	41	33.16	17
15	44	12.90	+ .514				.28		15	44	12.13	18
15	49	57.96	—1.625		01.12		.28		15	49	55.06	19
15	56	20.26	+ .469		01.32		.28		15	56	19.45	*20
16	06	08.54	+ .350		00.96		.28		16	06	07.61	21
16	19	48.58	+ .566		01.19		.28		16	19	47.87	22
16	21	57.43	— .430	+0	01.81	+0	01.28	+0.05	16	21	55.72	*23
6	38	12.74	+ .387	+0	01.28	+0	01.27	+0.10	6	38	11.86	24
7	08	26.04	+ .130				.27		7	08	25.20	*25
7	13	29.56	+ .127				.27		7	13	28.83	*26
7	31	03.84	+ .248		01.24		.27		7	31	02.82	27
7	35	41.12	+ .092	+0	01.28	+0	01.27	+0.10	7	35	39.94	28
13	41	22.56	+ .348			+0	01.60	+0.30	13	41	21.31	29
14	04	33.22	+ .303				.60		14	04	31.92	30
14	08	31.98	+ .135	+0	01.66		.60		14	08	30.51	31
14	10	38.70	+ .321				.61		14	10	37.41	32
14	14	05.26	+ .410				.61		14	14	04.06	33
14	19	01.10	+ .422				.61		14	18	59.91	34
14	26	09.76	+ .363				.61		14	26	08.51	35
14	28	40.62	+ .315				.61		14	28	39.32	36
14	33	22.88	+ .155				.61		14	33	21.42	*37
14	38	10.00	+ .087		01.71		.61		14	38	08.48	38
14	42	13.60	+ .337		01.54		.61		14	42	12.33	*39
14	48	20.16	+ .369				.61		14	48	18.92	*40
14	51	20.93	— .895	+0	01.65		.61		14	51	18.43	41
14	54	55.36	+ .394				.61		14	54	54.14	42
14	58	05.38	+ .340			+0	01.61	+0.30	14	58	04.11	*43
15	01	40.06	— .310			+0	01.91	+0.41	15	01	37.84	44
15	08	36.20	+ .044	+0	02.00		.92		15	08	34.32	45
15	12	17.52	+ .085				.92		15	12	15.68	46
15	15	44.02	+ .051				.92		15	15	42.15	47
15	19	26.78	+ .096				.92		15	19	24.96	48
15	24	10.38	+ .141			+0	01.92	+0.41	15	24	08.60	49

Nos. 8, 20. β Scorpii. The companion is of the 5.6 magnitude.
10, 12, 23, 39, 43. Two stars in the field of the instrument.
37. π Bootis double; smaller star of the 5.6 magnitude.
40. 1690 A. S. C. double; smaller star of the 7.8 magnitude.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 19 cont'd.	α Cor. Bor.	2	+27° 15′	16.5	41.0	15 28 05.3	29.7	54.2
2		κ Libræ	5	−19 10	10.9	34.0	15 32 56.9	20.0	42.9
3		α Serpentis	2.3	+ 6 55	51.0	13.0	15 36 34.8	56.6	18.5
4		b Scorpii	5	−25 16	47.3	11.3	15 41 35.2	59.2	23.2
5		A^1 Scorpii	5	−24 51	26.3	50.2	15 44 14.2	38.1	2.0
6		ρ Scorpii	4	−28 45	25.0	49.6	15 47 14.5	39.3	4.0
7		δ Scorpii	3	−22 10	19.0	42.5	15 51 06.0	29.4	52.8
*8		β^1 Scorpii	2	−19 22	35.3	58.3	15 56 21.3	44.3	7.3
9		g^1 Serpentis	6	+10 19	26.5	48.5	16 00 10.5	32.5	54.5
10		δ Ophiuchi	3	− 3 17	26.4	48.2	16 06 09.9	31.6	53.3
11		γ Herculis	4	+19 32	16.5	39.6	16 15 02.6	25.6	48.7
*12		η Draconis	3	+61 52	26.5	12.5	16 21 58.3	44.1	30.2
13	21	ε Bootis	3	+27 45	22.5	47.3	14 38 11.5	36.3	0.6
*14		α^2 Libræ	3	−15 23	30.5	53.1	14 42 15.5	37.9	0.5
15		12 Libræ	6	−23 59	29.6	53.5	14 45 17.2	41.0	4.6
16		1690 A. S. C.	6	−20 40	35.3	58.6	14 48 21.9	45.2	8.5
17		β Ursæ Min.	3	+74 48		59.3	14 51 22.3	45.5	
18		20 Libræ	3.4	−24 39	9.2	33.2	14 54 57.1	21.0	44.8
*19		ν^2 Libræ	6.7	−15 52	22.0	44.6	14 58 07.2	29.6	52.3
20		b Bootis	6	+26 55	52.5	16.9	15 01 41.3	5.7	30.0
21		τ Libræ	7	−17 10	0.6	23.3	15 05 46.0	8.8	31.5
22		β Libræ	2.3	− 8 48	53.5	15.5	15 08 37.5	59.4	21.4
*23		o^1 Libræ	7	−14 58	33.8	56.3	15 12 18.7	41.2	3.6
24		ε Libræ	5.6	− 9 45	1.2	23.2	15 15 45 3	7.4	29.4
25		ζ^1 Libræ	6	−16 10	43.0	5.6	15 19 28.3	50.8	13.4
26		α Cor. Bor	2	+27 15	17.8	42.2	15 28 06.6	31.0	55.5
27		κ Libræ	5	−19 10	12.3	35.1	15 32 58.0	21.1	44.2
28		α Serpentis	2.3	+ 6 55	52.3	14 3	15 36 36.1	58.0	19.8
29		b Scorpii	5	−25 16	48.2	12.3	15 41 36.3	0.3	24.3
30		A^1 Scorpii	5	−24 51	27.5	51.5	15 44 15.4	39.3	3.3
31		ζ Ursæ Min.	4	+78 17	26.0	13.0	15 49 59.7	46.5	33.5
*32		β^1 Scorpii	2	−19 22	36.5	59.5	15 56 22.5	45.5	8.5
33		g^2 Serpentis	7	+10 31	56.3	18.5	16 00 40.6	2.8	25.0
34		χ Scorpii	5	− 9 39	45.0	7.1	16 03 29.0	51.0	13.1
35		δ Ophiuchi	3	− 3 17	27.5	49.3	16 06 11.0	32.8	54.5
36		σ Scorpii	4	−25 13	55.1	19.0	16 11 43.0	7.0	31.0
37		γ Herculis	4	+19 32	18 0	41.0	16 15 04.0	27.0	50.0
38		α Scorpii	1	−26 05	2.5	26.6	16 19 51.0	15.3	39.5
*39		η Draconis	3	+61 52		13.5	16 21 59.4	45.3	
40		τ Scorpii	3.4	−27 53	21.7	46.3	16 26 10.7	35.2	59.9
41		33 Herculis	8	+ 7 26	34.5	56.3	16 29 18.2	40.1	2.0
42		24 Scorpii	5.6	−17 26	48.3	11.0	16 32 33.8	56.5	19.3
43		25 Scorpii	7	−25 14	30.8	54.8	16 37 18.8	44.7	8.8
44		υ Ophiuchi	7	−24 22	27.5	51.5	16 40 15.3	39.2	3.0
45		21 Ophiuchi	6	+ 1 30	48.0	9.7	16 43 31.3	53.0	14.8
46		ι Ophiuchi	4	+10 26	55.0	17.0	16 46 39.1	1.2	23.2
47		κ Ophiuchi	3.4	+ 9 38	34.5	56.5	16 50 18.5	40.5	2.5
48		ε Herculis	3	+31 10	30.8	56.2	16 54 21.6	47.0	12.3
49		60 Herculis	5	+12 58	25.5	48.0	16 58 10.2	32.5	54.6
50		η Ophiuchi	3	−15 31	41.5	4.0	17 01 26.5	49.1	11.5
51		29 Scorpii	7	−26 47	43.0	7.5	17 04 31.8	56.2	20.5
*52		α Herculis	3.4	+14 34	49.0	11.3	17 07 33.5	56.3	18.5

June 21.—Clear. The error of level was found to be −0s.64 after the observations.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
15	28	05.34	— .325	+0	01.83	+0	01.92	+0.41	15	28	03.10	1
15	32	56.94	+ .116				.92		15	32	55.14	2
15	36	34.78	— .083		01.96		.92		15	36	32.78	3
15	41	35.24	+ .155				.92		15	41	33.47	4
15	44	14.16	+ .152				.92		15	44	12.39	5
15	47	14.48	+ .177				.93		15	47	12.73	6
15	51	05.94	+ .135				.93		15	51	04.14	7
15	56	21.30	+ .117		01.98		.93		15	56	19.49	*8
16	00	10.50	+ .115				.93		16	00	08.68	9
16	06	09.88	+ .001		01.92		.93		16	06	07.95	10
16	15	02.60	+ .231				.93		16	15	00.90	11
16	21	58.32	—1.345	+0	01.88	+0	01.93	+0.41	16	21	55.05	*12
14	38	11.62	— .709	+0	02.55	+0	02.72	+0.86	14	38	08.19	13
14	42	15.50	— .388		02.72		.73		14	42	12.38	*14
14	45	17.18	— .319				.73		14	45	14.13	15
14	48	21.90	— .346				.73		14	48	18.82	16
14	51	22.36	—1.976		02.15		.73		14	51	17.65	17
14	54	57.06	— .313				.73		14	54	54.02	18
14	58	07.14	— .386				.73		14	58	04.02	*19
15	01	41.28	— .700				.73		15	01	37.85	20
15	05	46.04	— .374				.74		15	05	42.93	21
15	08	37.46	— .436		02.79		.74		15	08	34.28	22
15	12	18.66	— .392				.74		15	12	15.53	*23
15	15	45.30	— .426				.74		15	15	42.13	24
15	19	28.22	— .381				.74		15	19	25.10	25
15	28	06.62	— .704		02.76		.74		15	28	03.18	26
15	32	58.14	— .359				.75		15	32	55.03	27
15	36	36.10	— .547		02.81		.75		15	36	32.80	28
15	41	36.28	— .308				.75		15	41	33.22	29
15	44	15.40	— .318				.75		15	44	12.34	30
15	49	59.74	—2.435		02.67		.75		15	49	54.56	31
15	56	22.50	— .357		02.70		.76		15	56	19.38	*32
16	00	40.64	— .572				.76		16	00	37.31	33
16	03	29.04	— .425				.76		16	03	25.86	34
16	06	11.02	— .475		02.59		.76		16	06	07.79	35
16	11	43.02	— .308				.76		16	11	39.95	36
16	15	04.00	— .640				.76		16	15	00.60	37
16	19	50.98	— .300		02.66		.76		16	19	47.92	38
16	21	59.40	—1.249		03.08		.77		16	21	55.38	*39
16	26	10.76	— .285				.77		16	26	07.71	40
16	29	18.22	— .551				.77		16	29	14.90	41
16	32	33.78	— .372				.77		16	32	30.64	42
16	37	18.78	— .308				.77		16	37	15.70	43
16	40	15.30	— .311				.77		16	40	12.22	44
16	43	31.36	— .408				.77		16	43	28.18	45
16	46	39.10	— .571				.77		16	46	35.76	46
16	50	18.50	— .566				.78		16	50	15.15	47
16	54	21.58	— .741				.78		16	54	18.06	48
16	58	10.16	— .589				.78		16	58	06.79	49
17	01	26.52	— .388				.78		17	01	23.35	50
17	04	31.80	— .296				.78		17	04	28.72	51
17	07	33 72	— .602	+0	02 85	+0	02.78	+0.86	17	07	30.34	*52

Nos. 8, 32. β Scorpii double; smaller star of the 5.6 magnitude.
12, 14, 19, 23, 32, 39, 52. Two stars in the field of the instrument.
52. The companion to $_{\alpha}$ Herculis is of the 6th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
*1	June 21 cont'd.	θ Ophiuchi	3.4	—24° 50′	38.3	2.3	17 12 26.3	50.2	14.2
2		b Ophiuchi	5.6	—24 01	3.5	27.3	17 16 51.1	15.0	38.6
3		2003 A. S. C.	6	+20 13	21.0	44.0	17 20 07.0	30.0	53.3
4		Moon I	(13.2)	—25 45	36.4	1.4	17 23 26.5	51.6	16.7
5		α Ophiuchi	2	+12 41	58.8	21.0	17 27 43.3	5.5	27.7
6		κ Scorpii	3	—38 56	46.1	14.2	17 31 42.0	9.9	37.8
7		D Ophiuchi	5.6	—21 36	18.8	42.2	17 34 05.6	29.0	52.3
8		3 Sagittarii	5	—27 46	56.0	20.5	17 37 45.0	9.4	34.0
9		μ Herculis	4	+27 49	35.0	59.3	17 40 23.5	48.0	12.3
10		4 Sagittarii	5	—23 48	29.2	52.8	17 50 16.4	40.2	4.0
11	26	η Centauri	3	—41 27	44.0	13 0	14 25 41.9	10.8	39.7
12		1651 A. S. C.	6.7	—11 37	3.0	25.2	14 28 47.2	9.3	31.5
13		ζ Bootis	3.4	+14 25	2.6	25.3	14 33 47.5	10.0	32.5
14		ε Bootis	3	+27 45	27.5	52.3	14 38 16.7	41.0	5.5
*15		α^2 Libræ	3	—15 23	35.3	57.6	14 42 20.2	42.7	5.3
16		12 Libræ	6	—23 59	34.3	58.1	14 45 21.9	45.6	9.5
*17		1690 A. S. C.	6	—20 40	40.3	3.5	14 48 26.6	49.8	13.7
18		β Ursæ Min.	3	+74 48		3.5	14 51 26.5	49.5	
19		20 Libræ	4	—24 39	14.0	38.0	14 55 01.6	25.6	49.5
*20		ν^2 Libræ	7	—15 52	26.5	49.3	14 58 11.8	34.5	57.0
21		b Bootis	6.7	+26 55	57.2	21.5	15 01 45.9	10.3	34.5
22		τ Libræ	7	—17 10	5.5	28.0	15 05 50.7	13.5	36.3
23		β Libræ	2.3	— 8 48	58.3	20.3	15 08 42.3	4.2	26.2
*24		o^1 Libræ	7	—14 58	38.5	1.0	15 12 23.5	46.0	8.5
25		ε Libræ	5.6	— 9 45	6.0	28.0	15 15 50.0	12.0	34.0
26		ζ^1 Libræ	6	—16 10	47.5	10.3	15 19 32.9	55.6	18 1
27		ζ^4 Libræ	6	—16 19	26.5	49.1	15 24 11.6	34.3	57.0
28		α Cor. Bor.	2	+27 15	22.6	47.0	15 28 11.5	35.9	0.3
29		κ Libræ	5	—19 10	17.0	40.0	15 33 03.0	26.0	49.0
30		α Serpentis	2.3	+ 6 55	57.1	19.0	15 36 40.9	2.9	24.7
31		μ Serpentis	3.4	— 2 56	51.0	12.7	15 41 34.4	56.2	17.9
32		A^1 Scorpii	5	—24 51	32.4	56.3	15 44 20.2	44.1	8.0
33		ζ Ursæ Min.	4	+78 17	30.5	17.6	15 50 03.7	51.0	37.6
*34		β^1 Scorpii	2	—19 22	41.3	4.5	15 56 27.5	50.5	13.5
*35		g^2 Serpentis	7.8	+10 31	1.8	23.8	16 00 45.8	7.8	29.8
36		δ Ophiuchi	3	— 3 17	32.5	54.2	16 06 16.0	37.8	59.5
37		σ Scorpii	4	—25 12	59.6	23.8	16 11 48.0	12.0	35.8
38		γ Herculis	4	+19 32	22,5	45.8	16 15 08.6	31.9	54.4
39		α Scorpii	1	—26 05	7.5	31.7	16 19 55.9	20.1	44.2
*40		η Draconis	.3	+61 52		18.3	16 22 04.2	50.0	36.2
41	27	α Scorpii	1	—26 05	9.2	33.4	16 19 57.5	21.6	45 6
*42		η Draconis	3	+61 52		19.4	16 22 05.3	51.4	37.4
43		τ Scorpii	3.4	—27 53	27.8	52.5	16 26 17.0	41.5	6.0
44		33 Herculis	7.8	+ 7 26	40.6	2.5	16 29 24.3	46.2	8.2
45		24 Scorpii	5.6	—17 26	54.4	17.0	16 32 39.8	2.7	25.5
46		25 Scorpii	7	—25 14	37.0	1.0	16 37 25.0	49.0	13.0
47		υ Ophiuchi	6.7	—24 22	33.6	57.6	16 40 21.5	45.4	9.2
48		21 Ophiuchi	6	+ 1 30	54.0	15.8	16 43 37.5	59.2	21.0
49		ι Ophiuchi	4	+10 26	1.2	23.1	16 46 45.0	7.2	29.3
50		κ Ophiuchi	3	+ 9 38	40.5	2.6	16 50 24.5	46.5	8.5
51		ε Herculis	3	+31 10	37.2	2.7	16 54 28.0	53.5	18.6

June 26.—Clear. No error of collimation; level — $0^s.38$.
27.—Clear. Error of level — $0^s.78$. No error of collimation.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	*m.*	*s.*	*s.*	*m.*	*s.*	*m.*	*s.*	*s.*	*h.*	*m.*	*s.*	
17	12	26.26	— .315			+0	02.79	+0.86	17	12	23.16	*1
17	16	51.10	— .319				.79		17	16	47.99	2
17	20	07.06	— .643				.79		17	20	03.63	3
17	23	26.52	— .304				.79		17	23	23.43	4
17	27	43.26	— .588	+0	03.00		.79		17	27	39.88	5
17	31	42.00	— .184				.79		17	31	39.03	6
17	34	05.58	— .339				.79		17	34	02.45	7
17	37	44.98	— .286				.79		17	37	41.90	8
17	40	23.62	— .710				.80		17	40	20.11	9
17	50	16.52	— .322			+0	02.80	+0.86	17	50	13.40	10
14	25	41.88	+ .310			+0	07.94	+1.02	14	25	34.25	11
14	28	47.22	— .010				.94		14	28	39.27	12
14	33	47.58	— .239				.95		14	33	39.39	13
14	38	16.60	— .356	+0	07.93		.95		14	38	08.29	14
14	42	20.22	+ .032		07.87		.95		14	42	12.29	*15
14	45	21.88	+ .103				.96		14	45	14.02	16
14	48	26.78	+ .070				.96		14	48	18.89	*17
14	51	26.50	—1.845		06.71		.96		14	51	16.70	18
14	55	01.74	+ .100				.96		14	54	53.92	19
14	58	11.82	+ .026				.96		14	58	03.89	*20
15	01	45.88	— .348				.97		15	01	37.56	21
15	05	50.80	+ .038				.97		15	05	42.87	22
15	08	42.26	— .028		08.01		.97		15	08	34.26	23
15	12	23.50	+ .019				.97		15	12	15.55	*24
15	15	50.00	+ .025				.98		15	15	42.04	25
15	19	32.88	+ .030				.98		15	19	24.93	26
15	24	11.70	+ .032				.98		15	24	03 75	27
15	28	11.46	— .350		07.98		.99		15	28	03.12	28
15	33	03.00	+ .057				.99		15	32	55.07	29
15	36	40.92	— .165		08.03		.99		15	36	32.77	30
15	41	34.44	— .084				.99		15	41	26.37	31
15	44	20.20	+ .110				08.00		15	44	12.31	32
15	50	04.08	—1.871		07.93		.00		15	49	54.21	33
15	56	27.46	+ .058		08.07		.01		15	56	19.51	*34
16	00	45.80	— .195				.01		16	00	37.60	*35
16	06	16.00	— .081		07.96		.01		16	06	07.91	36
16	11	47.84	+ .115				.02		16	11	39.93	37
16	15	08.64	— .276				.02		16	15	00.34	38
16	19	55.88	+ .124		07.97		.02		16	19	47.98	39
16	22	04.17	—1.090	+0	08.11	+0	08.02	+1.02	16	21	55.06	*40
16	19	57.46	— .367	+0	09.06	+0	08.98	+0.72	16	19	48.11	41
16	22	05.35	—1.422	+0	08.98		.98		16	21	54.95	*42
16	26	16.96	— .348				.98		16	26	07.63	43
16	29	24.36	— .671				.98		16	29	14.71	44
16	32	39.88	— .453				.98		16	32	30.45	45
16	37	25.00	— .377				.99		16	37	15.63	46
16	40	21.46	— .386				.99		16	40	12.08	47
16	43	37.50	— .620				.99		16	43	27.89	48
16	46	45.16	— .697				.99		16	46	35.47	49
16	50	24.52	— .690				.99		16	50	14.84	50
16	54	28.00	— .804			+0	09.00	+0.72	16	54	18.20	51

Nos. 1, 15, 20, 24, 34, 35, 40, 42. Two stars in the field of the instrument.
17. 1690 A. S. C double; smaller star of the 8.9 magnitude.
34. β Scorpii double; smaller star of the 6th magnitude.

TRANSITS OBSERVED AT WASHINGTON IN 1842.

No. for ref.	Month and day.	Name of object.	Mag.	Declination.	I.	II.	III.	IV.	V.
					s.	s.	h. m. s.	s.	s.
1	June 27	60 Herculis	5.6	+12°58′	31.5	54.0	16 58 16.3	38.5	0.6
2	cont'd.	ε Ursæ Min.	4	+82 17		59.5	17 02 40.3	22.2	
*3		α Herculis	3.4	+14 34	54.5	17.0	17 07 39.3	1.7	24.2
*4		θ Ophiuchi	3.4	—24 50	44.5	8.5	17 12 32.4	56 4	20.3
*5		p Ophiuchi	4.5	+ 2 32	58.2	19.9	17 57 41.6	3.3	25.0
6		ο Herculis	4	+28 45	47.0	11.5	18 01 36.2	1.0	25.6
7		μ^1 Sagittarii	3.4	—21 06	46.1	9.5	18 04 32.7	56.0	19.3
8		g Sagittarii	5.6	—27 05	35.3	59.6	18 08 23.9	48.2	12.5
9		2106 A. S. C.	6	—15 52	31.5	54.0	18 11 16.5	39.0	1.5
*10		t Herculis	6	+28 48	15.1	40.0	18 15 04.5	29.3	54.0
*11		d Serpentis	6	+ 0 07	37.5	59.2	18 19 20.9	42.6	4.2
12		δ Ursæ Min.	3	+86 36			18 23 42.8		
*13		51 (Hev.) Cephei	5.6	+87 16			18 24 23.5		
14	29	α Cor. Bor.	2	+27 15	25.3	49.6	15 28 14.0	38.5	3.0
15		κ Libræ	5	—19 10	20.0	43.0	15 33 05.8	28.8	51.8
16		α Serpentis	2.3	+ 6 55	0.6	21.9	15 36 43.8	5.6	27.5
17		b Scorpii	5	—25 16	56.0	20.2	15 41 44.0	8.0	32.0
18		A^1 Scorpii	5	—24 51	35.3	59.2	15 44 23.1	46.9	10.8
19		ζ Ursæ Min.	4	+78 17	34.0	21.0	15 50 08.0	54.8	41.3
*20		β^1 Scorpii	2	—19 22	44.0	7.2	15 56 30.1	13.1	16.2
21		θ Draconis	4	+58 59		29.3	15 59 11.3	53.5	
*22		ν Scorpii	5	—19 02	17.7	41.0	16 03 03.9	26.8	49.9
23		δ Ophiuchi	3	— 3 17	35.2	56.9	16 06 18.6	40.2	2.1
24		σ Scorpii	4	—26 13	2.5	26.5	16 11 50.5	14.5	38.5
*25		g Ophiuchi	6.7	—23 05	34.6	58.4	16 16 21.8	45.5	9.2
26		α Scorpii	1	—26 05	10.2	44.5	16 19 58.6	22.6	46.8
*27		η Draconis	3	+61 52		21.0	16 22 07:2	53.3	39.3
28		h Herculis	4.5	+11 50	2.5	4.8	16 25 26.8	49.0	11.2
29		33 Herculis	8	+ 7 26	41.5	3.5	16 29 25.5	47.4	9.3
30		24 Scorpii	5	—17 26	55.6	18.5	16 32 41.2	3.9	26.5
*31		552 A. S. C.	4.5	+66 04	46.8	39.8	16 38 34.0	27.3	21.0
32		21 Ophiuchi	6	+ 1 30	55.2	16.8	16 43 38.5	0.2	21.9
33		1934 A. S. C.	7	—16 33	24.5	47.0	16 47 09.5	32.0	54.8
34		κ Ophiuchi	3	+ 9 38	42.0	4.0	16 50 26.0	48.0	10.0
35		ε Herculis	3	+31 10	48.5	4.2	16 54 29.2	54.3	20.0
36		60 Herculis	5.6	+12 58	33.0	55.2	16 58 17.5	39.8	2.0
37		ε Ursæ Min.	4	+82 17		3.0	17 02 44.8	27.0	
*38		α Herculis	3.4	+14 34	56.0	18.5	17 07 40.7	3.3	25.7
39	30	β Libræ	2.3	— 8 48	1.0	23.1	15 08 45.0	7.0	29.0
40		6 Serpentis	6	+ 1 18	30.7	52.3	15 13 14.0	35.7	57.5
41		α Cor. Bor.	2	+27 15	25.6	50.0	15 28 14.4	38.8	3.1
42		κ Libræ	5	—19 10	19.9	43.0	15 33 05.9	28.9	51.8
43		α Serpentis	2.3	+ 6 55	0.2	22.0	15 36 43.8	5.7	27.5
44		b Scorpii	5	—25 16	56.2	20.1	15 41 44.2	8.2	32.0
45		A^1 Scorpii	5	—24 51	35.2	59.1	15 44 23.0	47.0	10.9
46		ζ Ursæ Min.	4	+78 17		21.2	15 50 08.3	55.5	42.5
*47		β^1 Scorpii	2	—19 22	44.3	7.4	15 56 30.3	53.3	6.3
*48		g^1 Serpentis	6	+10 19	35.5	57.5	16 00 19.6	41.7	3.9
49		χ Scorpii	5	— 9 39	52.7	14.6	16 03 36.7	58.8	20.7
50		δ Ophiuchi	3	— 3 17	35.3	57.1	16 06 18.8	40.5	2.4
51		γ Herculis	4	+19 32	25.6	48.8	16 15 11.7	34.5	57.6

June 29.—Clear. The error of collimation was found —0s.80; level —0s.70.
30.—Clear till 16*h*. 11*m*. Level as yesterday. Error of collimation —0s.55.
July 2.—The instruments were all dismounted, and the transit returned to Mr. Hassler.

REDUCTION TO APPARENT RIGHT ASCENSIONS.

Mean of wires.			Instru'l correction.	Clock error by standard stars.		Clock error allowed.		Clock rate.	Apparent AR from observation.			No. for ref.
h.	m.	s.	s.	m.	s.	m.	s.	s.	h.	m.	s.	
16	58	16.18	— .720			+0	09.00	+0.72	16	58	06.46	1
17	02	40.66	—4.436	+0	09.50		.00		17	02	27.22	2
17	07	39.34	— .733		08.31		.00		17	07	29.61	*3
17	12	32.44	— .380				.01		17	12	23.05	*4
17	57	41.60	— .628				.03		17	57	31.94	*5
18	01	36.26	— .876				.03		18	01	26.35	6
18	04	32.72	— .418		09.06		.03		18	04	23.27	7
18	08	23.90	— .357				.03		18	08	14.51	8
18	11	16.50	— .468				.04		18	11	06.99	9
18	15	04.58	— .876				.04		18	14	54.66	*10
18	19	20.88	— .606				.04		18	19	11.23	*11
18	23	42.80	—8.849		09.05		.04		18	23	24.91	12
18	24	23.50	+9.610	+0	08.95	+0	09.04	+0.72	6	24	24.07	*13
15	28	14.08	—1.670	+0	09.31	+0	09.31	+0.35	15	28	03.10	14
15	33	05.88	—1.188				.31		15	32	55.38	15
15	36	43.76	—1.404		09.65		.32		15	36	33.04	16
15	41	44.04	—1.212				.32		15	41	33 51	17
15	44	23.06	—1.223				.32		15	44	12.52	18
15	50	07.82	—5.642		08.10		.32		15	49	52.86	19
15	56	30.12	—1.186		09.48		.32		15	56	19.61	*20
15	59	11.37	—2.830				.32		15	59	59.22	21
16	03	03.86	—1.189				.32		16	02	53.35	*22
16	06	18.60	—1.320		09.32		.32		16	06	07.96	23
16	11	50.50	—1.213				.32		16	11	39.97	24
16	16	21.90	—1.227				.33		16	16	11.34	*25
16	19	58.54	—1.221		09.28		.33		16	19	47.99	26
16	22	07.20	—3.093		09.19		.33		16	21	54.78	*27
16	25	26.86	—1.454				.33		16	25	16.08	28
16	29	25.44	—1.410				.33		16	29	14.70	29
16	32	41.14	—1.245				.33		16	32	30.57	30
16	38	33.76	+2.414				.33		4	38	26.84	*31
16	43	38.52	—1.357				.33		16	43	27.83	32
16	47	09.56	—1.248				.33		16	46	58.98	33
16	50	26.00	—1.430				.33		16	50	15.24	34
16	54	29.24	—1.746				.33		16	54	18.16	35
16	58	17.50	—1.467				.34		16	58	06.69	36
17	02	44.93	—9.103		09.25		.34		17	02	26.49	37
17	07	40.84	—1.339	+0	09.19	+0	09.34	+0.35	17	07	30.16	*38
15	08	45.02	—1.032	+0	09.78	+0	09.86	+0.50	15	08	34.13	39
15	13	14.04	—1.104				.87		15	13	03.07	40
15	28	14.38	—1.389		09.88		.87		15	28	03.12	41
15	33	05.90	— .921				.87		15	32	55.11	42
15	36	43.84	—1.152		09.98		.87		15	36	32.82	43
15	41	44.14	— .954				.88		15	41	33.31	44
15	44	23.04	— .953				.88		15	44	12.21	45
15	50	08.33	—4.411		09.92		.88		15	49	54.04	46
15	56	30.32	— .921		09.95		.88		15	56	19.52	*47
16	00	19.64	—1.181				.88		16	00	08 58	*48
16	03	36.70	—1.029				.88		16	03	25.79	49
16	06	18.82	—1.076	+0	09.79		.88		16	06	07.86	50
16	15	11.64	—1.233			+0	09.89	+0.50	16	15	00.47	51

Nos. 13, 31. 51 (Hev.) Cephei and 552 A. S. C., sub-polo.
3, 38. *a* Herculis double; smaller star of the 6.7 magnitude.
4, 10, 22, 25, 27, 47, 48. Two stars in the field of the instrument.
5. *p* Ophiuchi double; smaller star of the 6.7 magnitude.
11. *d* Serpentis double; smaller star of the 9th magnitude.
20, 47. The companion to β Scorpii is of the 5.6 magnitude.
25. *g* Ophiuchi double; smaller star of the 7th magnitude.

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 17 18	21 Andromedæ α	1 1	5 5	0 00 14.25 14.21	+0.301 .289	0 00 13.95 13.92
Means		1				0 00 13.935
Jan. 17 18	88 Pegasi γ	2.3 2.3	5 5	0 05 06.73 06.83	+0.471 .460	0 05 06.26 06.37
Means		2.3				0 05 06.314
Jan. 17 18	18 Cassiopeæ α	3 3	5 5	0 31 34.92 34.61	+0.065 .038	0 31 34.85 34.57
Means		3				0 31 34.713
Jan. 17 18	16 Ceti β	2.3 2.3	5 5	0 35 40.07 40.09	+0.777 .766	0 35 39.29 39.32
Means		2.3				0 35 39.308
Jan. 18	24 Cassiopeæ η	4	5	0 39 35.00	+0.136	0 39 34.864
Jan. 18	27 Cassiopeæ γ	3	5	0 47 13.43	+0.109	0 47 13.321
Jan. 18	79 Piscium ψ^2	6	5	0 59 29.92	+0.741	0 59 29.179
Jan. 19 Feb. 27 April 22 23	1 Ursæ Min. α	1.2 2.3 2.3 2.3	1 1 1 1	1 02 27.55 03.01 01 58.75 59.13	−13.778 40.675 45.090 44.758	1 02 41.33 43.68 43.84 43.89
Means		2.3				1 02 43.185
Jan. 19	86 Piscium ζ^1	6	5	1 05 29.37	+0.857	1 05 28.513
Jan. 18 19	89 Piscium *f*	6 6	5 5	1 09 39.97 39.67	+0.893 .881	1 09 39.08 38.79
Means		6				1 09 38.933
Jan. 18 19	91 Piscium *l*	6 6	5 5	1 12 24.84 24.51	+0.820 .806	1 12 24.02 23.70
Means		6				1 12 23.862
Jan. 19	45 Ceti θ^1	3	5	1 16 08.54	+0.960	1 16 07.580
Jan. 18 19	158 A. S. C.	7 7	5 5	1 20 07.19 07.01	+0.944 .931	1 20 06.25 06.08
Means		7				1 20 06.162

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 18 19	99 Piscium η	4 4	5 5	1 23 03.19 03.22	+1.092 .072	1 23 02.10 02.15
Means		4				1 23 02.123
Jan. 19	101 Piscium	6	5	1 27 21.00	+0.964	1 27 20.036
Jan. 19	105 Piscium	6	5	1 31 10.94	+0.983	1 31 09.957
Jan. 19	107 Piscium	6	5	1 33 56.94	+0.993	1 33 55.947
Jan. 19	110 Piscium o	5	5	1 37 04.26	+1.034	1 37 03.226
Jan. 19	193 A. S. C.	6.7	5	1 41 26.50	+1.044	1 41 25.456
Jan. 19	6 Arietis β	3	3	1 45 56.52	+1.087	1 45 55.443
Jan. 19	8 Arietis ι	6	5	1 48 44.87	+1.104	1 48 43.766
Jan. 19	59 Ceti υ^2	4.5	5	1 52 34.72	+1.149	1 52 33.571
Jan. 19	13 Arietis α	3	5	1 58 17.96	+1.175	1 58 16.785
Jan. 19	15 Arietis	6	5	2 01 54.01	+1.191	2 01 52 819
Jan. 19	65 Ceti ξ^1	5	5	2 04 39.13	+1.191	2 04 37.939
Jan. 19	22 Arietis θ^1	6.7	5	2 09 22.21	+1.256	2 09 20.954
Jan. 21	48 Arietis ϵ	5	5	2 50 12.93	+1.256	2 50 11.674
Jan. 21 Feb. 17	92 Ceti α	2.3 2.3	5 5	2 54 03.29 02.69	+1.473 .105	2 54 01.82 01.58
Means		2.3				2 54 01.701
Jan. 21 Feb. 17	57 Arietis δ	4 4	5 5	3 02 38.16 37.53	+1.584 .243	3 02 36.58 36.29
Means		4				3 02 36.432
Feb. 17	2 Tauri ξ	4	5	3 18 37.97	+1 261	3 18 36.709
Feb. 17	5 Tauri f	5.6	5	3 22 10.74	+1.295	3 22 09.445
Feb. 17	11 Tauri	6	5	3 31 22.16	+1.415	3 31 20.745

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 21	Fornacis τ	6	5	3 32 15.14	+1.625	3 32 13.515
Jan. 21	16 (Pleiadum) g	5.6	3	3 35 27.22	+1.840	3 35 25.380
Jan. 17	17 (Pleiadum) b	4.5	5	3 35 32.10	+1.883	3 35 30.22
21		4.5	3	32.38	.965	30.42
Feb. 17		4.5	5	31.70	.566	30.13
Means		4.5				3 35 30.257
Jan. 17	25 Tauri η	3	5	3 38 08.12	+1.911	3 38 06.21
21		3	4	08.20	.865	06.33
Feb. 17		3	5	07.64	.466	06.17
Means		3				3 38 06.237
Feb. 17	28 Eridani m^2	5	5	3 40 53.45	+1.200	3 40 52.250
Jan. 21	426 A. S. C.	5	5	3 42 47.93	+1.695	3 42 46.23
22		5	5	47.44	.675	45.76
Means		5				3 42 46.000
Feb. 17	44 Persei ζ	3.4	5	3 44 14.45	+1.558	3 44 12.892
Jan. 21	32 Eridani	5	5	3 46 23.69	+1.720	3 46 21.97
22		5	5	23.52	.721	21.80
Means		5				3 46 21.884
Feb. 17	33 Eridani l	5.6	5	3 47 00.91	+1.226	3 46 59.684
Jan. 17	34 Eridani γ^1	2.3	5	3 50 41.39	+1.688	3 50 39.702
Jan. 21	37 Tauri A^1	5	5	3 55 23.51	+1.934	3 55 21.58
22		5	5	23.84	.944	21.90
Means		5				3 55 21.736
Feb. 18	42 Tauri ψ	5.6	4	3 57 17.12	+1.619	3 57 15.501
Jan. 22	Eridani A	6.7	5	3 59 08.52	+1.735	3 59 06.785
Feb. 18	44 Tauri P	5.6	4	4 01 15.14	+1.629	4 01 13.511
Jan. 23	463 A. S. C.	7	5	4 03 31.90	+1.993	4 03 29.907
Jan. 22	39 Eridani	5	5	4 06 54.69	+1.774	4 06 52.916

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 22	52 Tauri ϕ	6	5	4 10 41.14	+2.101	4 10 39.039
Jan. 22	63 Tauri	6	5	4 14 23.58	+1.999	4 14 21.581
Feb. 19	69 Tauri υ^1	5	5	4 16 53.39	+2.065	4 16 51.325
Jan. 22	43 Eridani	4.5	5	4 18 08.14	+1.811	4 18 06.329
Jan. 21	87 Tauri α	1	5	4 26 53.46	+2.077	4 26 51.38
22		1	5	53.53	.067	51.46
Feb. 19		1	5	53.20	1.712	51.49
Means		1				4 26 51.443
Feb. 19	51 Eridani c	6	5	4 29 40.71	+1.618	4 29 39.092
Jan. 22	92 Tauri σ^2	5.6	5	4 30 16.50	+2.079	4 30 14.421
Feb. 19	94 Tauri τ	5	5	4 32 48.06	+1.962	4 32 46.098
Jan. 22	54 Eridani	4	5	4 33 33.87	+1.810	4 33 32.060
Feb. 19	Cœli Sculp. β	5	5	4 36 29.74	+1.331	4 36 28.409
Mar. 2	552 A. S. C.	4.5	5	4 38 26.81	+2.509	4 38 24.30
June 29		4.5	5	26.84	1.687	25.15
Means		4.5				4 38 24.727
Feb. 19	96 Tauri K	6	5	4 40 44.17	+1.783	4 40 42.387
Jan. 22	60 Eridani	6.7	5	4 43 06.50	+1.936	4 43 04.564
Feb. 19	7 Camelop. b	5	5	4 44 41.30	+2.484	4 44 38.816
Jan. 22	9 Orionis o^2	5	5	4 47 31.81	+2.144	4 47 29.666
Feb. 19	62 Eridani b	5	5	4 48 39.20	+1.644	4 48 37.556
Jan. 22	10 Orionis s	5.6	5	4 50 23.93	+2.052	4 50 21.878
Feb. 19	63 Eridani	5	5	4 52 23.43	+1.622	4 52 21.808
Jan. 22	102 Tauri ι	5.6	5	4 53 41.91	+2.277	4 53 39.63
23		5.6	5	41.74	.267	39.47
Means		5.6				4 53 39.553

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Feb. 19	1 Leporis	6	5	4 56 06.42	+1.546	4 56 04.874
Jan. 22	104 Tauri *m*	5.6	5	4 58 09.30	+2.276	4 58 07.02
23		5	5	09.20	.269	06.93
Means		5				4 58 06.978
Feb. 19	14 Orionis *i*	6	5	4 59 18.96	+1.834	4 59 17.126
Jan. 17	19 Orionis β	1	5	5 06 58.71	+2.091	5 06 56.62
22		1	5	58.83	.060	56.77
23		1	5	58.81	.053	56.76
Feb. 19		1	5	58.62	1.716	56.90
May 31		1	5	57.64	.025	56.62
Means		1				5 06 56.734
Jan. 22	20 Orionis τ	4	5	5 09 58.24	+2.078	5 09 56.162
Feb. 19	626 A. S. C.	6	5	5 10 26.60	+1.688	5 10 24.912
Jan. 22	6 Leporis λ	4.5	5	5 12 19 85	+2.060	5 12 17.79
23		4.5	5	19.88	.049	17.83
Means		4.5				5 12 17.810
Jan. 22	112 Tauri β	2	5	5 16 21.24	+2.520	5 16 18.72
23		2	5	21.05	.512	18.54
Feb. 19		2	3	20.96	.193	18.77
20		2	5	20.75	.178	18.57
Means		2				5 16 18.650
Jan. 23	658 A. S. C.	7	5	5 19 45.29	+2.081	5 19 43.209
Feb. 19	9 Leporis β	4.5	5	5 21 30.19	+1.685	5 21 28.50
20		4.5	5	30.41	.668	28.74
Means		4.5				5 21 28.623
Jan. 22	34 Orionis δ	2	5	5 23 58.38	+2.177	5 23 56.20
23		2	5	58.41	.169	56.24
Means		2				5 23 56.222
Jan. 23	11 Leporis α	3.4	5	5 25 47.81	+2.084	5 25 45.73
Feb. 19		3.4	5	47.62	1.730	45.89
20		3.4	5	47.59	.714	45.88
Means		3.4				5 25 45.833

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Jan. 22	46 Orionis ε	2.3	5	5 28 14.10	+2.183	5 28 11.917
Jan. 23	125 Tauri	6	5	5 29 59.33	+2.530	5 29 56.80
Feb. 19		6	5	59.35	.233	57.12
20		6	5	59.36	.216	57.14
Means		6				5 29 57.020
Jan. 22	Columbæ α	2	5	5 33 58.03	+2.122	5 33 55.91
23		2	5	57.90	.109	55.79
Feb. 19		2	5	57.32	1.655	55.67
20		2	5	57.55	.635	55.92
Means		2				5 33 55.823
Feb. 19	129 Tauri	6.7	5	5 37 42.81	+2.127	5 37 40.68
20		6.7	5	42.76	.123	40.64
Means		6.7				5 37 40.660
Feb. 19	53 Orionis κ	3	5	5 40 17.72	+1.857	5 40 15.86
20		3	5	17.77	.841	15.93
Means		3				5 40 15.896
Jan. 23	136 Tauri C	5.6	5	5 43 26.66	+2.629	5 43 24.03
Feb. 19		5.6	5	26.64	.537	24.10
20		5.6	5	26.43	.526	23.93
Means		5.6				5 43 24.020
Feb. 19	58 Orionis α	1	5	5 46 39.43	+2.076	5 46 37.35
20		1	5	39.32	.064	37.26
May 31		1	5	38.18	0.984	37.20
June 1		1	5	38.22	.991	37.23
Means		1				5 46 37.260
Jan. 23	139 Tauri	5.6	5	5 48 14.21	+2.614	5 48 11.596
Feb. 20	59 Orionis	6	5	5 50 14.32	+2.012	5 50 12.308
Jan. 23	1 Geminorum H	5	5	5 54 33.87	+2.856	5 54 31.014
Feb. 20	62 Orionis χ^2	5	5	5 54 34.66	+2.275	5 54 32.385
Jan. 23	17 Leporis ρ	5.6	5	5 57 58.39	+2.184	5 57 56.206
Feb. 20	5 Geminorum	7	5	6 01 53.44	+2.390	6 01 51.050

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 23	1 Lyncis *a*	5	5	6 03 25.33	+4.492	6 03 20.838
Feb. 20	7 Geminorum η	4.5	5	6 05 22.93	+2.377	6 05 20.553
Jan. 23	2 Lyncis *b*	4.5	3	6 05 45.42	+4.243	6 05 41.177
Feb. 20	75 Orionis *l*	6	3	6 08 26.17	+2.271	6 08 23.899
Jan. 23	11 Geminorum	8	5	6 09 44.80	+2.651	6 09 42.149
Jan. 23 Feb. 20	13 Geminorum μ	3 3	5 5	6 13 26.80 26.59	+2.645 .431	6 13 24.15 24.16
Means		3				6 13 24.157
Feb. 20	3 Canis Maj. λ	4	5	6 16 22.26	+1.841	6 16 20.419
Jan. 23	16 Geminorum	7	5	6 18 35.52	+2.624	6 18 32.896
Jan. 23 24 Feb. 20 21 April 26 28 29 June 27	51 (Hev.) Cephei	5.6 5.6 5 5 5 5 5 5.6	1 1 1 1 1 1 1 1	6 25 04.54 02.93 24 57.43 57.03 31.12 29.84 28.71 24.07	+37.347 .159 30.522 .160 5.228 4.556 3.788 −2.862	6 24 27.19 25.77 26.91 26.87 25.89 25.28 24.92 26.93
Means		5				6 24 26.220
Feb. 20 21	24 Geminorum γ	3 3	5 5	6 28 37.29 37.22	+2.896 .385	6 28 34.89 34.83
Means		3				6 28 34.864
Jan. 24	54 Aurigæ	6	5	6 29 37.93	+2.829	6 29 35.101
Feb. 20 21	25 Geminorum	7.8 7.8	5 5	6 31 25.93 25.94	+2.639 .628	6 31 23.29 23.31
Means		7.8				6 31 23.301
Feb. 20 21	27 Geminorum ε	3 3	5 5	6 34 15.20 15.01	+2.589 .578	6 34 12.61 12.43
Means		3				6 34 12.521
Jan. 24	28 Geminorum	6	5	6 34 46.92	+2.864	6 34 44.056

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 24	9 Canis Maj. α	1	5	6 38 13.38	+2.272	6 38 11.11
Feb. 20		1	5	13.16	.051	11.11
21		1	5	13.06	.036	11.02
Mar. 20		1	2	12.61	1.587	11.02
May 31		1	5	11.77	0.641	11.13
June 1		1	5	11.74	.640	11.10
12		1	5	11.86	.639	11.22
Means		1				6 38 11.101
Jan. 24	Arg. in pup.	5	5	6 42 05.22	+2.292	6 42 02.928
Feb. 20	36 Geminorum d	6	5	6 42 07.56	+2.561	6 42 05.00
21		6	5	07.42	.548	04.87
Mar. 20		6	5	06.71	.129	04.58
Means		6				6 42 04.817
Feb. 20	849 A. S. C.	5	5	6 45 09 67	+1.971	6 45 07.70
21		5	5	09.43	.961	07.47
Means		5				6 45 07.584
Jan. 24	38 Geminorum e^1	5.6	5	6 45 46.58	+2.575	6 45 44.005
Jan. 24	39 Geminorum y^1	6.7	5	6 49 05.85	+2.828	6 49 03.022
Feb. 20	20 Canis Maj. ι	4.5	5	6 49 07.65	+2.095	6 49 05.56
21		4.5	5	07.46	.082	05.38
Mar. 16		4.5	5	07.39	1.712	05.68
20		4.5	3	07.09	.638	05.45
Means		4.5				6 49 05.518
Feb. 20	21 Canis Maj. ε	2.3	5	6 52 26.85	+2.033	6 52 24.82
21		2.3	2	26.87	.016	24.85
Mar. 16		2.3	5	26.84	1.589	25.25
20		2.3	5	26.71	.505	25.20
Means		2.3				6 52 25.032
Jan. 24	42 Geminorum ω^1	6	5	6 52 49.95	+2.801	6 52 47.149
Feb. 20	43 Geminorum ζ	4	5	6 54 46.75	+2.796	6 54 43.95
21		4	5	46.96	.785	44.17
Means		4				6 54 44.064
Mar. 16	22 Canis Maj. σ	4	5	6 55 27.25	+1.614	6 55 25.64
20		4	5	27.29	.531	25.76
Means		4				6 55 25.697

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Feb. 21	45 Geminorum *o*	6	5	6 59 20.80	+2.522	6 59 18.278
Jan. 24	46 Geminorum *τ*	5	5	7 01 07.80	+2.975	7 01 04.82
Mar. 16		5	5	07.19	.484	04.71
Means		5				7 01 04.765
Mar. 20	20 Monocerotis	5.6	5	7 02 24.62	+1.883	7 02 22.737
Feb. 21	886 A. S. C.	6	5	7 03 14.30	+2.084	7 03 12.216
Jan. 24	51 Geminorum	5	5	7 04 20.53	+2.665	7 04 17.865
Mar. 16	53 Geminorum *z*	6	5	7 06 07.30	+2.463	7 06 04.84
20		6	5	07.25	.405	04.84
Means		6				7 06 04.841
Feb. 21	893 A. S. C.	7.8	5	7 07 43.18	+2.563	7 07 40.617
Jan. 24	55 Geminorum *δ*	3.4	5	7 10 43.85	+2.786	7 10 41.06
Feb. 21		3.4	5	43.70	.689	41.01
Mar. 16		3.4	5	43.33	.376	40.95
20		3.4	5	43.42	.312	41.11
Means		3.4				7 10 41.032
Mar. 20	910 A. S. C.	6	5	7 14 36.73	+1.666	7 14 35.064
Jan. 24	59 Geminorum	6.7	5	7 14 46.24	+2.934	7 14 43.31
Feb. 21		6.7	5	46.40	.835	43.56
Mar. 16		6.7	5	45.70	.493	43.21
Means		6.7				7 14 43.360
Jan. 24	31 Canis Maj. *η*	3	5	7 17 53.00	+2.325	7 17 50.675
Feb. 21	3 Canis Min. *β*	3	5	7 18 37.23	+2.478	7 18 34.75
Mar. 16		3	5	37.09	.163	34.93
20		3	5	36.98	.126	34.85
Means		3				7 18 34.843
Jan. 24	924 A. S. C.	7	5	7 21 45.26	+2.330	7 21 42.93
Feb. 21		6	5	44.87	.135	42.74
Mar. 16		6.7	5	44.82	1,735	43.09
20		6	5	44.90	.666	43.23
Means		6.7				7 21 42.997

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 24	8 Canis Min. δ^2	6	5	7 24 57.16	+2.511	7 24 54.65
Mar. 20		5.6	5	56.84	.088	54.75
Means		5.6				7 24 54.700
Feb. 21	69 Geminorum υ	5	2	7 26 14.17	+2.868	7 26 11.30
22		5	5	13.73	.859	10.87
Mar. 16		5	5	13.39	.561	10.83
Means		5				7 26 11.000
Mar. 20	Arg. in pup. n^1	6	5	7 27 39.58	+1.768	7 27 37.812
Jan. 24	10 Canis Min. α	1.2	5	7 31 04.14	+2.533	7 31 01.61
Feb. 21		1.2	5	04.28	.481	01.80
22		1.2	5	04.13	.471	01.66
Mar. 16		1.2	5	03.75	.201	01.55
20		1.2	5	03.80	.141	01.66
June 12		1.2	5	02.82	1.215	01.61
Means		1.2				7 31 01.648
Jan 24	77 Geminorum κ	4	5	7 34 57.22	+2.884	7 34 54.836
Feb 21	78 Geminorum β	2	5	7 35 41.55	+2.932	7 35 38.62
22		2	5	41 32	.922	38.40
Mar. 16		2	5	41.04	.634	38.41
20		2	5	41.06	.566	38.49
June 12		2	5	39.94	1.524	38.42
Means		2				7 35 38.468
Feb. 22	82 Geminorum B	7	5	7 39 09.29	+2.822	7 39 06.47
Mar. 16		7	5	09.01	.552	06.46
Means		7				7 39 06.463
Mar. 16	7 Argus ξ	4	5	7 42 40.91	+1.905	7 42 39.005
Feb. 22	13 Canis Min. ζ	5.6	5	7 43 32.77	+2.517	7 43 30.253
Feb. 22	Arg. in pup. b	5	5	7 47 05.69	+2.188	7 47 03.502
Feb. 22	2 Cancri ω^1	6.7	5	7 51 24.92	+2.919	7 51 22.001
Feb. 22	8 Cancri	6	5	7 56 19.20	+2.681	7 56 16.519
Feb. 22	15 Argus	3.4	5	8 00 51.47	+2.286	8 00 49.184

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Feb. 22	16 Cancri ζ	6.7	5	8 03 11.79	+2.787	8 03 09.003
Feb. 22	17 Cancri β	4	5	8 07 59.50	+2.651	8 07 56.849
Feb. 22	1013 A. S. C.	6.7	5	8 11 10.83	+2.876	8 11 07.954
Feb. 22	20 Cancri d^1	6	5	8 14 21.77	+2.829	8 14 18.941
Feb. 22	31 Cancri θ	5.6	5	8 22 37.78	+2.849	8 22 34.931
Feb. 22	4 Ursæ Maj. π^2	5	5	8 26 25.59	+5.983	8 26 19.607
Feb. 22	6 Hydræ	5.6	5	8 32 34.89	+2.460	8 32 32.430
Feb. 22 23 Mar. 20	47 Cancri δ	4.5 4.5 4.5	5 5 5	8 35 45.06 45.08 44 59	+2.878 .875 .660	8 35 42.18 42.21 41.93
Means		4.5				8 35 42.107
Feb. 23 Mar. 20	11 Hydræ ϵ	4 4	5 5	8 38 27.11 26.78	+2.685 .485	8 38 24.42 24.29
Means		4				8 38 24.360
Feb. 22 23	54 Cancri	6.7 6.7	5 5	8 42 16.19 16.08	+2.840 .838	8 42 13.35 13.24
Means		6.7				8 42 13.296
Mar. 20	55 Cancri ρ^2	6	5	8 43 13.50	+2.944	8 43 10.556
Jan. 26	1086 A. S. C.	7	5	8 44 19.98	+2.762	8 44 17.218
Feb. 22 23	58 Cancri ρ^4	6 6	5 5	8 46 14.51 14.53	+3.137 .135	8 46 11.37 11.39
Means		6				8 46 11.384
Jan. 26 Mar. 20	62 Cancri o^1	6 6	5 5	8 48 28.44 28.34	+2.725 .565	8 48 25.71 25.77
Means		6				8 48 25.745
Feb. 22 23	65 Cancri α^2	5 5	5 5	8 49 53.50 53.36	+3.036 .036	8 49 50.46 50.32
Means		5				8 49 50.394

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 26	69 Cancri ν	6	5	8 53 32.37	+2.906	8 53 29.461
Jan. 26	18 Hydræ ω	6	5	8 57 41.52	+2.557	8 57 38.96
Feb. 23		6	5	41.54	.700	38.84
Means		6				8 57 38.901
Jan. 26	1112 A. S. C.	5.6	5	9 01 09.25	+2.354	9 01 06.90
Feb. 23		5.6	5	09.06	.447	06.61
Means		5.6				9 01 06.754
Feb. 23	22 Hydræ θ	4.5	5	9 06 11.10	+2 677	9 06 08.423
Jan. 26	24 Hydræ	6	5	9 08 59.37	+2.431	9 08 56.94
27		6	5	59.43	.446	56 98
Means		6				9 08 56.961
Feb. 23	83 Cancri q	7	5	9 10 12.38	+2.930	9 10 09.450
Jan. 26	27 Hydræ	5.6	5	9 12 48.46	+2.402	9 12 46.06
27		5.6	5	48.55	.414	46.14
Means		5.6				9 12 46.097
Feb. 23	Pixid Naut. θ	5	5	9 14 32.12	+2.476	9 14 29 644
Jan. 26	Pixid Naut. λ	5.6	5	9 16 24 36	+2.389	9 16 22 02
27		5.6	5	24.39	.351	22.04
Means		5.6				9 16 22.030
Jan. 26	30 Hydræ α	2	5	9 19 51.85	+2.390	9 19 49.46
27		2	5	51.96	.404	49.56
Feb. 23		2	5	51.85	.580	49.27
Means		2				9 19 49.430
Jan. 26	5 Leonis ξ	5.6	5	9 23 28.28	+2.702	9 23 25.58
27		6	5	28.31	.712	25.60
Feb. 23		5	5	28.35	.828	25.52
Means		5.6				9 23 25 567
Jan. 26	7 Leonis	7	5	9 27 17.15	+2.649	9 27 17.501
Jan. 26	14 Leonis ο	4	5	9 32 45.43	+2.567	9 32 42.86
27		4	5	45.38	.582	42.80

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1842.
				h. m. s.	s.	h. m. s.
Feb. 23	14 Leonis ο cont'd.	4	5	9 32 45.49	+2.822	9 32 42.67
24		4	5	45.51	.822	42.69
May 17		4	5	44.93	.032	42.90
Means		4				9 32 42.784
Jan. 26	17 Leonis ε	3	5	9 36 55.45	+2.802	9 36 52.65
27		3	5	55.16	.819	52.34
Feb. 23		3	5	55.48	3.077	52.40
24		3	5	55.48	.077	52.40
May 17		3	5	54.64	2.243	52.40
Means		3				9 36 52.438
Jan. 27	29 Ursæ Maj.	4.5	4	9 39 46.57	+4.604	9 39 41.97
May 17		4.5	5	45.31	3.029	42.28
Means		4.5				9 39 42.123
Feb. 23	30 Ursæ Maj. φ	5	5	9 41 23.76	+4.480	9 41 19.28
24		5	5	23.21	.482	18.73
Means		5				9 41 19.004
Jan. 27	6 Sextantis t	7	5	9 43 18.74	+2.408	9 43 16.332
May 17	24 Leonis μ	3	5	9 43 48.17	+2.304	9 43 45.866
Jan. 27	9 Sextantis	7	5	9 45 53.29	+2.494	9 45 50.80
Feb. 23		7	5	53.54	.753	50.79
24		7.8	5	53.55	.755	50.80
Means		7				9 45 50.797
Jan. 27	27 Leonis ν	5.6	5	9 49 45.74	+2.583	9 49 43.157
Feb. 23	11 Sextantis	6	5	9 49 47.78	+2.801	9 49 44.98
24		6	5	47.82	.804	45.02
Means		6				9 49 44.998
April 20	29 Leonis π	4.5	5	9 51 53.72	+2.448	9 51 51.272
Jan. 27	1198 A. S. C.	6.7	5	9 54 02.47	+2.739	9 53 59.731
Feb. 23	1199 A. S C.	7.8	5	9 54 56.08	+2.588	9 54 53.49
24		7.8	5	56.18	.591	53.59
Means		7.8				9 54 53.540

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 27	1202 A. S. C.	7	5	9 57 08.77	+2.615	9 57 06.155
Jan. 27	32 Leonis α	1	5	9 59 59.71	+2.545	9 59 57.17
Feb. 23		1	5	10 00 00.01	.853	57.16
24		1	5	9 59 59.96	.857	57.10
May 17		1	5	59.44	.209	57.23
Means		1				9 59 57.165
Feb. 24	1215 A. S. C.	6	5	10 03 26.92	+2.639	10 03 24.281
Feb. 24	1220 A. S. C.	6	5	10 07 42.24	+2 962	10 07 39.278
Jan. 27	37 Leonis	6	5	10 08 14.05	+2.553	10 08 11.497
Jan. 27	41 Leonis γ	2	5	10 11 17.89	+2.646	10 11 15 24
Feb. 24		2	5	18.32	3.001	15.32
Means		2				10 11 15.281
Jan. 27	43 Leonis z	7	5	10 14 46.56	+2.440	10 14 44.12
Feb. 24		6	5	47.00	.783	44.22
Means		6.7				10 14 44.168
Jan. 27	42 Hydræ μ	4	5	10 18 29.24	+2.258	10 18 26.98
Feb. 24		4	5	29 68	.837	26.84
Means		4				10 18 26.912
Jan. 27	28 Sextantis k	6	5	10 21 29.58	+2.330	10 21 27.250
Feb. 24	1249 A. S. C.	5.6	6	10 22 14.10	+2.525	10 22 11.575
April 20	30 Sextantis l	6	5	10 22 15.15	+2.491	10 22 12 659
Jan. 27	47 Leonis ρ	4	5	10 24 31.71	+2.442	10 24 29.268
April 20	37 Ursæ Maj. m	5	5	10 25 00.21	+4.040	10 24 56.170
Feb. 24	48 Leonis	5.6	5	10 26 36.17	+2.755	10 26 33.415
April 20	1 Hyd. & Crat.	6	5	10 28 36.29	+2.387	10 28 33.903
April 20	34 Sextantis	6	5	10 34 30.34	+2.610	10 34 27.73
21		6	5	30.22	.578	27.64
Means		6				10 34 27.686

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Feb. 24	35 Sextantis	6	5	10 35 11.40	+2.707	10 35 08.693
April 20	52 Leonis *k*	6	5	10 38 05.48	+2.732	10 38 02.75
21		6	5	05.43	.722	02.71
Means		6				10 38 02.728
Feb. 24	3 Hyd. & Crat. b^1	6	5	10 39 10.46	+2.570	10 39 07.890
April 20	41 Sextantis *f*	6	5	10 42 24.96	+2.511	10 42 22.45
21		6	5	24.96	.503	22.46
Means		6				10 42 22.453
Feb. 24	6 Hyd. & Crat. b^3	5.6	5	10 45 48.51	+2.308	10 45 46.20
Mar. 25		6	5	48.44	.644	45.80
April 20		5.6	5	48.44	.460	45.98
21		5.6	5	48.36	.451	45.91
Means		5.6				10 45 45.973
Mar. 25	57 Leonis	7	3	10 48 06.84	+2.777	10 48 04.063
Feb. 24	1299 A. S. C.	5	5	10 49 24 65	+2.626	10 49 22.02
April 20		5	5	24.58	.432	22.15
21		5	5	24.53	.420	22.11
Means		5				10 49 22.093
Mar. 25	48 Ursæ Maj. β	2	5	10 52 20.35	+4.543	10 52 15.807
April 20	58 Leonis *d*	5	5	10 52 26.56	+2.664	10 52 23.90
21		5	5	26.61	.656	23.95
Means		5				10 52 23.925
Feb. 24	50 Ursæ Maj. α	1.2	3	10 54 00.54	+5.068	10 53 55.47
May 16		1.2	5	53 59.19	3.727	55.46
18		1.2	5	59.24	.657	55.58
Means		1.2				10 53 55 503
Feb. 24	63 Leonis χ	4 5	5	10 56 54.70	+2.745	10 56 51.96
Mar 25		4.5	5	54.60	.849	51.75
April 20		5	5	54.59	.696	51.89
21		5	5	54.49	.691	51.80
Means		4.5				10 56 51.850

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec. &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
May 16	9 Hyd. & Crat. χ^1	5	5	10 57 45.92	+2.224	10 57 43.70
18		5	5	46.22	.182	44.04
Means		5				10 57 43.867
Mar. 25	67 Leonis	6	5	11 00 22.92	+3.234	11 00 19.69
April 20		6	5	22.82	2.977	19.84
21		6	5	23.04	.966	20.07
Means		6				11 00 19.867
May 16	10 Hyd. & Crat.	5	5	11 01 08.09	+2.229	11 01 05.861
Mar. 25	68 Leonis δ	3	5	11 05 44.77	+3.071	11 05 41.70
April 20		3	5	44.73	2.928	41.80
21		3	5	44.87	.920	41.95
May 16		3	5	44.45	.650	41.80
18		3	5	44.59	.626	41.96
Means		3				11 05 41.842
April 21	74 Leonis φ	5.6	5	11 08 40.54	+2.661	11 08 37.88
May 16		5	5	40.10	.435	37.66
Means		5				11 08 37.772
Mar. 25	12 Hyd. & Crat. δ	3.4	5	11 11 29.29	+2.735	11 11 26.55
April 20		3.4	5	29.32	.621	26.70
21		3.4	5	29.37	.615	26.76
May 15		3.4	5	29.39	.395	27.00
16		3.4	5	29.21	.385	26.83
18		3.4	5	29.30	.365	26.94
Means		3.4				11 11 26.797
May 18	77 Leonis σ	4	4	11 13 01.84	+2.360	11 12 59.480
Mar. 25	13 Hyd. & Crat. λ	6	5	11 15 34.77	+2.814	11 15 31.96
April 21		6	5	34.85	.616	32.23
May 16		6	5	34.66	.386	32.27
18		6	5	34.94	.365	32.58
Means		6				11 15 32.260
Mar. 25	16 Hyd. & Crat. κ	6	5	11 19 14.74	+2.838	11 19 11.90
April 21		6	5	14.92	.657	12.26
May 16		6	5	14.73	.444	12.29
18		6	3	14.92	.423	12.50
Means		6				11 19 12.238

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1842.
				h. m. s.	s.	h. m. s.
Mar. 25	87 Leonis e	4.5	5	11 22 17.28	+2.811	11 22 14.47
April 21		5	5	17.36	.827	14.53
May 16		4.5	5	17.24	.515	14.73
18		4.5	5	17.37	.507	14.86
Means		4.5				11 22 14.648
Mar. 25	19 Hyd. & Crat. ξ	4	5	11 25 17.15	+2.591	11 25 14.56
May 16		4	5	17.21	.410	14.80
18		4	5	17.38	.386	14.99
Means		4				11 25 14.783
Mar. 25	21 Hyd. & Crat.	5	5	11 28 42.96	+2.876	11 28 40.08
May 16		4	5	42.96	.513	40.45
Means		4.5				11 28 40.265
April 21	91 Leonis υ	4.5	5	11 28 54.45	+2.759	11 28 51.69
22		4.5	5	54.32	.753	51.57
May 18		4.5	5	54.36	.545	51.82
Means		4.5				11 28 51.693
Mar. 25	27 Hyd. & Crat. ζ	4	5	11 36 48.25	+2.781	11 36 45.469
April 21	2 Virginis ξ^1	5	5	11 37 10.93	+2.861	11 37 08.07
22		5.6	3	10.94	.855	08.09
May 16		5	5	10.49	.668	07.82
Means		5				11 37 07.993
Mar. 25	94 Leonis β	2.3	5	11 41 02.65	+2.982	11 40 59.67
26		2.3	5	02.71	.976	59.73
April 21		2.3	5	02.50	.926	59.57
22		2.3	5	02.57	.919	59.65
May 15		2.3	5	02.47	.736	59.73
16		2.3	5	02.26	.726	59.53
18		2.3	5	02.28	.706	59.57
Means		2.3				11 40 59.636
April 21	5 Virginis θ	3.4	4	11 42 30.50	+2.855	11 42 27.64
22		3.4	4	30.52	.850	27.67
Means		3.4				11 42 27.657
Mar. 25	64 Ursæ Maj. γ	2	5	11 45 33.81	+4.245	11 45 29.57
26		2	5	33.85	.245	29.61
April 21		2	5	34.16	.035	30.13
22		2	5	33.56	.018	29.54
May 15		2	5	33.03	3.553	29.48

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
May 16	64 Ursæ Maj. γ	2	5	11 45 32.99	+3.530	11 45 29.46
18	cont'd.	2	5	32.78	.484	29.30
Means		2				11 45 29.584
Mar. 26	1383 A. S. C.	7	5	11 50 10.88	+2.890	11 50 07.990
April 22	Virginis	7	5	11 51 31.67	+2.864	11 51 28.806
April 22	1 Comæ Ber.	6.7	5	11 53 41.36	+3.061	11 53 38.299
Mar. 25	1390 A. S. C.	7	5	11 55 43.14	+2.905	11 55 40.23
26		7	5	43.47	.909	40.56
Means		7				11 55 40.398
April 22	1393 A. S. C.	7	5	11 57 57.32	+2.846	11 57 54.474
Mar. 25	1 Corvi α	4.5	5	12 00 19.16	+2.839	12 00 16.32
26		4.5	5	19.47	.842	16.63
Means		4.5				12 00 16.474
April 22	10 Virginis r	6	5	12 01 38 34	+2.883	12 01 35.457
Mar. 25	4 Comæ Ber.	6	5	12 03 52.95	+3.168	12 03 49.78
26		6	5	53.10	.171	49.93
Means		6				12 03 49.855
April 22	5 Comæ Ber.	6	5	12 04 09.81	+2.961	12 04 06.849
Mar. 26	69 Ursæ Maj. δ	3	5	12 07 39.53	+4.430	12 07 35.10
April 22		3	5	39.05	.245	34.81
Means		3				12 07 34.952
Mar. 25	7 Comæ Ber. h	5	5	12 08 23.68	+3.128	12 08 20.552
Mar. 25	15 Virginis η	3.4	5	12 11 52.09	+2.867	12 11 49.22
26		3.4	5	52.41	.873	49.54
April 22		3.4	5	52.24	.899	49.34
Means		3.4				12 11 49.367
Mar. 26	6 Corvi ι	5.6	5	12 15 11.41	+2.871	12 15 08.539
Mar. 26	15 Comæ Ber. c	5	5	12 19 06.80	+3.199	12 19 03.60
April 23		5	5	06.84	.196	03.64
Means		5				12 19 03.622

REDUCTION TO MEAN RIGHT-ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1842.
				h. m. s.	*s.*	*h. m. s.*
Mar. 26	19 Virginis	8	5	12 22 35.34	+2.943	12 22 32.397
Feb. 27	21 Virginis *q*	5.6	5	12 25 40.51	+2.534	12 25 37.98
April 22		5.6	5	40.73	.920	37.81
23		5.6	5	40.71	.920	37.79
Means		5.6				12 25 37.860
Mar. 26	9 Corvi *β*	2.3	5	12 26 08.88	+2.880	12 26 06.000
Feb. 27	Hyd. & Crat. *d*	5.6	5	12 29 23.16	+2.558	12 29 20.60
Mar. 26		6	5	23.41	.908	20.50
April 22		5.6	5	23.29	.988	20.30
23		5.6	5	23.41	.988	20.42
Means		5.6				12 29 20.455
Feb. 27	29 Virginis *γ*¹	3	5	12 33 42.08	+2.511	12 33 39.57
Mar. 26		3	5	42.37	.847	39.52
April 22		3	3	42.42	.938	39.48
23		3	5	42.38	.926	39.45
Means		3				12 33 39.508
Feb. 27	33 Virginis	6.7	5	12 38 23.51	+2.581	12 38 20.93
Mar. 26		6	5	24.10	.930	21.17
April 22		6	5	24.03	3.016	21.01
Means		6				12 38 21.037
Mar. 26	30 Comæ Ber.	6	5	12 41 38.56	+3.142	12 41 35.42
April 22		6	5	38.52	.210	35.31
Means		6				12 41 35.364
Feb. 27	1480 A. S. C.	7	5	12 43 12.44	+2.491	12 43 09 949
Mar. 26	35 Comæ Ber. *q*	5	5	12 45 34.06	+3.038	12 45 31.022
Feb. 27	40 Virginis *ψ*	5.6	5	12 46 11.20	+2.484	12 46 08.72
April 22		5.6	5	11.67	.983	08.69
23		5.6	5	11.55	.984	08.57
Means		5.6				12 46 08.660
Feb. 27	36 Comæ Ber. *r*	5.6	5	12 51 09.12	+2.596	12 51 06.52
April 23		5	5	09.70	3.091	06.61
Means		5				12 51 06.566

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Mar. 26	38 Comæ Ber.	6.7	5	12 53 23.94	+2.976	12 53 20.96
27		6	5	23.52	.986	20.53
Means		6				12 53 20.749
April 23	47 Virginis ε	3.4	5	12 54 21.80	+3.049	12 54 18.751
Feb. 27	48 Virginis k^4	6.7	5	12 55 48.74	+2.473	12 55 46.267
Mar. 27	1502 A. S. C.	7	5	12 58 10.16	+2.879	12 58 07.281
Mar. 26	Virginis	7	5	12 58 35.84	+2.871	12 58 32.969
April 23	39 Comæ Ber. *t*	6	5	12 58 42.19	+3.137	12 58 39.053
Feb. 27	49 Virginis *g*	6	5	12 59 40.11	+2.447	12 59 37.663
Jan. 31	51 Virginis θ	4.5	5	13 01 48.11	+1.765	13 01 46.35
Mar. 26		4.5	5	49.58	2.855	46.73
27		4.5	5	49.32	.865	46.46
Means		4.5				13 01 46.513
Jan. 31	55 Virginis	6	5	13 05 45.93	+1.737	13 05 44.19
Feb. 27		6.7	5	46.82	2.450	44.37
Mar. 26		6	5	47.22	.893	44.33
27		6	5	47.37	.903	44.47
April 23		6	5	47.28	3.083	44.20
Means		6				13 05 44.312
Jan. 31	58 Virginis	7.8	5	13 09 12.40	+1.720	13 09 10.68
Feb. 27		7.8	5	13.33	2.418	10.91
Mar. 26		7	5	13.93	.855	11.08
27		7	5	13.84	.866	10.97
Means		7				13 09 10.910
April 23	60 Virginis σ	5.6	5	13 09 40.64	+3.047	13 09 37.593
Jan. 31	62 Virginis	7	5	13 12 04.26	+1.707	13 12 02.55
Feb. 27		7.8	5	05.09	2.411	02.68
Mar. 26		7	5	05.44	.856	02.58
27		7	5	05.52	.867	02.65
April 23		7	5	05.42	3.056	02.36
Means		7				13 12 02.564
Jan. 31	67 Virginis α	1	5	13 16 54.40	+1.690	13 16 52.71
Feb. 27		1	5	55.05	2.392	52.66

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Mar. 26	67 Virginis *α*	1	5	13 16 55.60	+2.848	13 16 52.75
27	cont'd.	1	5	55.48	.858	52.62
Means		1				13 16 52.685
Jan. 31	70 Virginis *w*	6	5	13 20 43.84	+1.714	13 20 42.13
Mar. 27		5.6	5	45.19	2.904	42.29
Means		5.6				13 20 42.200
Jan. 31	75 Virginis	6	5	13 24 27.34	+1.644	13 24 25.70
Feb. 27		6.7	5	28.15	2 380	25.77
Mar. 27		6	5	28.60	.804	25.80
Means		6				13 24 25.757
Jan. 31	Hydræ con. *f*	6	5	13 28 05.08	+1.640	13 28 03.44
Feb. 27		6.7	5	05.84	2.424	03.42
Mar. 27		6	5	06.46	.962	03.50
Means		6				13 28 03.453
Jan. 31	1 Bootis	6	5	13 33 09.40	+1.656	13 33 07.74
Feb. 27		6	5	10.13	2.412	07.72
Mar. 27		6	5	10.79	.922	07.87
Means		6				13 33 07.777
Jan. 31	85 Virginis	6	5	13 37 06.90	+1.583	13 37 05.32
Feb. 1		6	5	07.07	.615	05.46
27		6.7	5	07.57	2.341	05.23
Mar. 27		6.7	4	08.11	.870	05.24
Means		6				13 37 05.312
Mar. 27	2 Centauri *g*	5	5	13 40 22.00	+3.073	13 40 18.927
Jan. 31	89 Virginis *x*	5.6	5	13 41 19.46	+1.562	13 41 17.90
Feb. 1		5.6	5	19.59	.596	17.99
27		5.6	5	20.18	2.334	17.80
June 18		5.6	5	21.31	3.119	18.19
Means		5.6				13 41 17.970
Feb. 1	4 Centauri *h*	5	5	13 44 09.81	+1.611	13 44 08.20
Mar. 27		5	5	11.20	3.033	08.17
Means		5				13 44 08 183
Jan. 31	8 Bootis *η*	3	5	13 47 11.20	+1.564	13 47 09.64

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Feb. 1	8 Bootis *η*	3	5	13 47 11.29	+1.594	13 47 09.70
Means		3				13 47 09.666
Jan. 31	4 Hydræ con. δ^2	6	5	13 51 11.68	+1.526	13 51 10.15
Feb. 1		6	5	11.79	.559	10.23
Mar. 27		6	5	13.29	2.942	10.35
Means		6				13 51 10.243
Jan. 31	11 Bootis	6.7	5	13 54 02.18	+1.527	13 54 00.65
Feb. 1		6.7	5	02.23	.553	00.68
Mar. 27		6	5	03.68	2.922	00.76
28		6	5	03.52	.939	00.58
Means		6				13 54 00.668
Jan. 31	5 Centauri *θ*	3	5	13 57 26.06	+1.513	13 57 24.55
Feb. 1		3	5	26.19	.546	24.63
Mar. 27		2	5	27.73	3.089	24.64
28		2	5	27.76	.108	24.65
Means		2.3				13 57 24.618
Mar. 27	96 Virginis *y*	7	5	14 00 38.96	+2.817	14 00 36.14
28		7	5	38.94	.833	36.11
Means		7				14 00 36.125
Jan. 31	1610 A. S. C.	5.6	5	14 02 14.80	+1.457	14 02 13.34
Feb. 1		5.6	5	15.01	.489	13.52
Means		5.6				14 02 13.432
Jan. 31	98 Virginis *κ*	4	5	14 04 29.86	+1.437	14 04 28.42
Feb. 1		4	5	30.21	.470	28.74
Mar. 27		4	5	31.56	2.811	28.75
28		4	5	31.40	.826	28.57
June 18		4	5	31.92	3.198	28.72
Means		4				14 04 28.640
Jan. 31	16 Bootis *α*	1	5	14 08 28.88	+1.411	14 08 27.47
Feb. 1		1	5	28.95	.442	27.51
Mar. 27		1	5	30.35	2.778	27.57
28		1	5	30.13	.798	27.33
May 23		1	5	30.45	3.156	27.29
June 18		1	5	30.51	.022	27.49
Means		1				14 08 27.443

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Jan. 31	100 Virginis λ	4	5	14 10 35.61	+1.409	14 10 34.20
Feb. 1		4	5	35.59	.442	34.15
Mar. 27		5	5	37.43	2.819	34.61
28		5	5	37.12	.836	34.28
June 18		5	5	37.41	3.262	34.15
Means		4.5				14 10 34.278
Feb. 1	7 Hydræ con.	6	5	14 14 01.95	+1.454	14 14 00.50
June 18		6	5	04.06	3.473	00.59
Means		6				14 14 00.541
Mar. 28	2 Libræ	6	5	14 14 58.83	+2.819	14 14 56.011
Feb. 1	8 Hydræ con.	5.6	5	14 18 57.81	+1.420	14 18 56.39
Mar. 28		5.6	5	59.40	3.001	56.40
June 18		6	5	59.91	.541	56.37
Means		5.6				14 18 56.387
Mar. 28	25 Bootis ρ	4.5	5	14 25 04.30	+2.830	14 25 01.47
May 23		4	5	04.29	3.253	01.04
Means		4				14 25 01.253
June 26	Centauri η	3	5	14 25 34.25	+3.839	14 25 30.411
Feb. 1	1651 A. S. C.	6.7	5	14 28 37.37	+1.346	14 28 36.02
Mar. 28		6.7	5	38.89	2.799	36.09
June 18		6.7	5	39.32	3.353	35.97
26		6.7	5	39.27	.313	35.96
Means		6.7				14 28 36.010
Feb. 1	29 Bootis π	5	5	14 33 19.61	+1.256	14 33 18.25
Mar. 28		5.6	5	20.81	2.716	18.09
May 23		4	5	21.19	3.227	17.96
June 18		4	5	21.42	.154	18.27
Means		4.5				14 33 18.143
June 26	30 Bootis ζ	3.4	5	14 33 39.39	+3.286	14 33 36.104
Mar. 28	36 Bootis ε	3	5	14 38 07.97	+2.735	14 38 05.24
April 25		3	5	08.34	3.127	05.21
May 23		3	5	08.36	.244	05.12
June 11		3	5	08.58	.188	05.39
18		3	5	08.48	.139	05.34
21		3	5	08.19	.115	05.08
26		3	5	08.29	.065	05.23
Means		3				14 38 05.230

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
Feb. 1	9 Libræ α^2	3	5	14 42 10.19	+1.291	14 42 08.90
Mar. 28		3	5	11.73	2.789	08.94
29		3	5	11.67	.818	08.85
April 25		3	5	12.14	3.246	08.89
May 23		3	5	12.33	.474	08.86
June 11		3	5	12.51	.496	09.01
18		3	5	12.33	.482	08.85
21		3	5	12.38	.473	08.91
26		3	5	12.29	.448	08.84
Means		3				14 42 08.894
Feb. 1	12 Libræ	6	5	14 45 11.87	+1.288	14 45 10.58
April 25		6	5	13.86	3.380	10.48
June 21		6	5	14.13	.626	10.50
26		6	5	14.02	.579	10.44
Means		6				14 45 10.500
April 25	1690 A. S. C.	6.7	5	14 48 18.51	+3.329	14 48 15.18
May 23		6	5	18.89	.575	15.32
June 18		6	5	18.92	.596	15.32
21		6	5	18.82	.586	15.23
26		6	5	18.89	.554	15.34
Means		6				14 48 15.276
Feb. 1	14 Libræ	8	5	14 48 19.59	+1.276	14 48 18.314
Feb. 1	7 Ursæ Min. β	3	1	14 51 13.59	+0.530	14 51 13.06
Mar. 28		3	5	17.94	4.624	13.32
29		3	5	18.98	.674	14.31
April 25		3	3	19.65	5.442	14.21
May 23		3	3	19.55	.158	14.39
June 11		3	5	18.82	4.388	14.43
18		3	3	18.43	.057	14.37
21		3	3	17.65	3.839	13.81
26		3	3	16.70	.514	13.19
Means		3				41 51 13.899
Feb. 1	20 Libræ	3.4	5	14 54 51.55	+1.246	14 54 50.30
Mar. 28		3.4	5	53.42	2.887	50.53
29		3.4	5	53.23	.910	50.32
April 25		3.4	5	53.50	3.404	50.10
May 23		3.4	5	54.10	.676	50.42
June 18		3.4	5	54.14	.712	50.43
21		3 4	5	54.02	.704	50.32
26		3.4	5	53.92	.683	50.24
Means		3.4				14 54 50.332
Mar. 28	22 Libræ ν^2	6.7	5	14 58 03 51	+2.772	14 58 00.74
April 25		6.7	5	03.59	3.264	00.33

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
June 18	22 Libræ cont'd. ν^2	6.7	5	14 58 04.11	+3.571	14 58 00.54
21		6.7	5	04.02	.563	00.46
26		7	5	03.89	.543	00.35
Means		6.7				14 58 00.484
Mar. 28	45 Bootis c	6	5	15 00 24.31	+2.617	15 00 21.69
29		5	5	24.50	.639	21.86
May 23		5	5	25.20	3.257	21.94
Means		5				15 00 21.830
April 25	46 Bootis b	6	5	15 01 37.75	+3.235	15 01 34.52
June 19		6	5	37.84	.195	34.66
21		6	5	37.85	.182	34.67
26		6.7	5	37.56	.144	34.42
Means		6				15 01 34.565
Mar. 28	24 Libræ ι^1	5.6	5	15 03 16.35	+2.796	15 03 13.55
29		5	5	16.60	.821	13.78
May 23		5 6	5	17.34	3.601	13.74
June 5		5.6	5	17.13	.677	13 45
Means		5.6				15 03 13.630
April 25	26 Libræ τ	7	5	15 05 42.64	+3.401	15 05 39.24
June 21		7	5	42.93	.626	39.30
26		7	5	42.87	.611	39.26
Means		7				15 05 39.267
Mar. 28	27 Libræ β	2.3	5	15 08 33.48	+2.674	15 08 30.81
29		2.3	5	33.52	.704	30.82
April 25		2.3	5	33.94	3.180	30.76
May 23		2.3	5	34.29	.464	30.83
June 5		2.3	5	34.17	.514	30.66
11		2.3	5	34.17	.528	30.65
19		2.3	5	34.32	.515	30.81
21		2.3	5	34.28	.512	30.77
26		2.3	5	34.26	.496	30.76
30		2.3	5	34.13	.484	30.65
Means		2.3				15 08 30.752
Mar. 29	29 Libræ o^1	7	5	15 12 14.82	+2.748	15 12 12.07
April 25		7	5	15.26	3.254	12.01
June 19		7	5	15.68	.628	12.05
21		7	5	15.53	.624	11.91
26		7	5	15.55	.610	11.94
Means		7				15 12 11.996

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
une 30	6 Serpentis	6	5	15 13 03.07	+3.369	15 12 59.701
Mar. 29	31 Libræ ε	5.6	5	15 15 41.19	+2.687	15 15 38.50
une 19		5.6	5	42.15	3.561	38.59
21		5.6	5	42.13	.548	38.58
26		5.6	5	42.04	.545	38.50
Means		5.6				15 15 38.542
April 25	32 Libræ ζ^1	6	5	15 19 24.67	+3.269	15 19 21.40
June 19		6	5	24.96	.683	21.28
21		6	5	25.10	.681	21.42
26		6	5	24.93	.671	21.26
Means		6				15 19 21.340
April 25	35 Libræ ζ^4	6	5	15 24 03.45	+3.269	15 24 00.18
June 26		6	5	03.75	.697	00.05
Means		6				15 24 00.117
Mar. 2	5 Cor. Bor. α	2	5	15 28 01.51	+1.768	15 27 59.74
29		2	5	02.48	2.496	59.98
April 25		2	5	03.11	.994	28 00.12
May 23		2	2	03.43	3.256	00.17
June 5		2	5	03.26	.288	27 59.97
11		2	5	03.08	.284	59.80
19		2	5	03.10	.252	59.85
21		2	5	03.18	.242	59.94
26		2	5	03.12	.212	59.91
29		2	5	03.10	.194	59.91
30		2	5	03.12	.188	59.93
Means		2				15 27 59.938
Mar. 2	43 Libræ κ	5	5	15 32 52.96	+1.987	15 32 50.97
29		5	5	54.09	2.740	51.35
April 25		5	5	54.55	3.312	51.24
June 19		5	5	55.14	.807	51.33
21		5	5	55.03	.806	51.22
26		5	5	55.07	.807	51.26
29		5	5	55.38	.792	51.59
30		5	5	55.11	.789	51.32
Means		5				15 32 51.285
Mar. 2	24 Serpentis α	2.3	5	15 36 31.14	+1.798	15 36 29.34
29		2.3	5	31.79	2.498	29.29
April 25		2.3	5	32.38	3.018	29.36
June 5		2.3	5	32.73	.408	29.32
11		2.3	5	32.76	.428	29.33
19		2.3	5	32.78	.428	29.35
21		2.3	5	32.80	.425	29.38

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
June 26	24 Serpentis *α* cont'd.	2.3	5	15 36 32.77	+3.410	15 36 29.36
29		2.3	5	33.04	.401	29.64
30		2.3	5	32.82	.398	29.42
Means		2.3				15 36 29.379
April 25	32 Serpentis *μ*	3.4	5	15 41 25.95	+3.088	15 41 22.86
June 26		3.4	5	26.37	.508	22.86
Means		3.4				15 41 22.862
Mar. 2	1 Scorpii *b*	5	5	15 41 31.32	+2.006	15 41 29.31
29		5	5	32.23	.806	29.42
June 5		5	5	33.35	3.945	29.41
11		5	5	33.16	.974	29.19
19		5	5	33.47	.994	29.48
21		5	5	33.22	.994	29.23
29		5	5	33.51	.986	29.52
30		5	5	33.31	.993	29.32
Means		5				15 41 29.360
April 25	2 Scorpii A¹	5	5	15 44 11.50	+3.449	15 44 08.05
June 5		5	5	12.23	.945	08.29
11		5	5	12.13	.975	08.16
19		5	5	12.39	.995	08.40
21		5	5	12.34	.993	08.35
26		5	5	12.31	.996	08.31
29		5	5	12.52	.990	08.53
30		5	5	12.21	.989	08.22
Means		5				15 44 08.289
Mar. 2	Scorpii *f*²	6	5	15 44 34.31	+1.976	15 44 32.334
June 19	5 Scorpii *ρ*	4	5	15 47 12.73	+4.148	15 47 08.582
Mar. 2	6 Scorpii *π*	3.4	5	15 49 20.18	+1.975	15 49 18.20
April 25		3.4	5	21.60	3.430	18.17
Means		3.4				15 49 18.187
Jan. 21	16 Ursæ Min. *ζ*	4	1	15 49 47.20	—3.083	15 49 50.28
22		4	1	46.83	2.982	49.81
Feb. 17		4	1	53.42	0.303	53.72
Mar. 29		4	2	54.60	+3.667	50.93
June 5		4	5	53.73	4.722	49.01
11		4	5	55.06	.861	50.20
21		4	5	54.56	.284	50.28
26		4	5	54.21	3.927	50.28
29		4	5	52.86	.715	49.15
30		4	4	54.04	.644	50.40
Means		4				15 49 50.406

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec. &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
Mar. 29	7 Scorpii δ	3	5	15 51 02.79	+2.728	15 51 00.06
June 19		3	5	04.14	3.961	00.18
Means		3				15 51 00.120
April 25	3 Herculis	6	5	15 53 03.84	+3.013	15 53 00.827
Mar. 2	1829 A. S. C.	6	5	15 53 50.42	+1.952	15 53 48.468
Mar. 2	8 Scorpii δ^1	2	5	15 56 17.47	+1.897	15 56 15.57
29		2	5	18.23	2.668	15.56
April 25		2	5	18.71	3.294	15.42
June 5		2	5	19.32	.853	15.47
11		2	5	19.45	.891	15.66
19		2	5	19.49	.915	15.58
21		2	5	19.38	.919	15.46
26		2	5	19.51	.924	15.59
29		2	5	19.61	.927	15.68
30		2	5	19.52	.928	15.59
Means		2				15 56 15.548
Mar. 2	Scorpii m	6	5	15 58 32.40	+1.936	15 58 30.464
June 29	13 Draconis θ	4	3	15 59 59.22	+3.191	15 59 56.029
June 19	45 Serpentis g^1	6	5	16 00 08.68	+3.455	16 00 05.22
30		6	5	08.58	.441	05.14
Means		6				16 00 05.182
Mar. 29	46 Serpentis g^3	7	5	16 00 36.32	+2.371	16 00 33.95
April 26		6.7	5	37.11	.959	34.15
June 21		7	5	37.31	3.455	33.86
26		7.8	5	37.60	.350	34.25
Means		7				16 00 34.053
Mar. 2	13 Scorpii c^2	5	5	16 02 36,91	+1.933	16 02 34.977
June 29	14 Scorpii ν	5	5	16 02 53.35	+3.944	16 02 49.406
April 26	15 Scorpii χ	5	5	16 03 25.14	+3.149	16 03 21.99
June 21		5	5	25.86	.739	22.12
30		5	5	25.79	.938	21.85
Means		5				16 03 21.987
Mar. 2	1 Ophiuchi δ	3	5	16 06 05.99	+1.711	16 06 04.28
29		3	5	06.68	2.452	04.23
April 26		3	5	07.24	3.062	04.18

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1. 1842.
				h. m. s.	s.	h. m. s.
June 19	1 Ophiuchi δ	3	5	16 06 07.95	+3.648	16 06 04.30
21	cont'd.	3	5	07.79	.648	04.14
26		3	5	07.91	.648	04.26
29		3	5	07.96	.648	04.31
30		3	5	07.86	.648	04.21
Means		3				16 06 04.239
Mar. 29	20 Scorpii σ	4	5	16 11 38.74	+2.709	16 11 36.03
April 26		4	5	39.03	3.418	35.61
June 21		4	5	39.95	4.140	35.81
26		4	5	39.93	.149	35.78
29		4	5	39.97	.151	35.82
Means		4				16 11 35 810
Mar. 2	20 Herculis γ	4	5	16 14 58.77	+1 483	16 14 57.29
29		3.4	5	59.50	2.247	57.25
June 19		4	5	15 00.90	3.398	57.50
21		4	5	00.60	.396	57.20
26		4	5	00.34	.393	56.95
30		4	5	00.47	.382	57.09
Means		4				16 14 57.213
June 29	5 Ophiuchi g	6.7	5	16 16 11.34	+4.114	16 16 07.226
Mar. 2	21 Scorpii α	1	5	16 19 45.62	+1.853	16 19 43.77
29		1	5	46.58	2.693	43.89
April 26		1	5	47.19	3.428	43.76
June 5		1	5	47.95	4.088	43.86
11		1	5	47.87	.140	43.73
21		1	5	47.92	.205	43.72
26		1	5	47.98	.215	43.77
27		1	5	48.11	.217	43.89
29		1	5	47.99	.221	43.77
Means		1				16 19 43.796
Jan. 22	14 Draconis η	3	1	16 21 50.77	—1.070	16 21 51.84
Feb. 19		3	5	52.60	+0.312	52.29
Mar. 2		3	3	52.53	.882	51.65
29		3	4	54.73	2.219	52.51
April 26		3	4	54.96	3.118	51.84
June 5		3	3	55.24	.548	51.69
11		3	3	55.72	.512	52.21
19		3	5	55.05	.424	51.63
21		3	3	55.38	.394	51.99
26		3	4	55.06	.299	51.76
27		3	4	54.95	.280	51.67
29		3	4	54.78	.242	51.54
Means		3				16 21 51.885

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
June 29	29 Herculis *h*	4.5	5	16 25 16.08	+3.496	16 25 12.584
Mar. 2	23 Scorpii τ	3.4	5	16 26 05.35	+1.824	16 26 03.53
June 21		3.4	5	07.71	4.282	03.43
27		3.4	5	07.63	.302	03.33
Means		3.4				16 26 03.430
Mar. 2	33 Herculis	7.8	5	16 29 12.97	+1.490	16 29 11.48
June 21		8	5	14.90	3.556	11.34
27		7.8	5	14.71	.565	11.15
29		8	5	14.70	.564	11.14
Means		7.8				16 29 11.278
Mar. 2	24 Scorpii	5	5	16 32 28.36	+1.685	16 32 26.68
June 21		5.6	5	30.64	4.011	26.63
27		5.6	5	30.45	.031	26.42
29		5	5	30.57	.035	26.54
Means		5				16 32 26.568
June 21	25 Scorpii	7	5	16 37 15.70	+4.242	16 37 11.46
27		7	5	15.63	.266	11.36
Means		7				16 37 11.411
June 21	18 Ophiuchi υ	6	5	16 40 12.22	+4.225	16 40 07.99
27		6.7	5	12.08	.250	07.83
Means		6				16 40 07.912
Mar. 2	21 Ophiuchi	6	5	16 43 25.82	+1.469	16 43 24.35
June 21		6	5	28.18	3.668	24.51
27		6	5	27.89	.687	21.20
29		6	5	27.83	.691	24.14
Means		6				16 43 24.300
June 21	25 Ophiuchi ι	4	5	16 46 35.76	+3.547	16 46 32.21
27		4	5	35.47	.562	31.91
Means		4				16 46 32.060
June 29	1934 A. S. C.	7	5	16 46 58.98	+4.066	16 46 54.014
June 21	27 Ophiuchi κ	3.4	5	16 50 15.15	+3.564	16 50 11.59
27		3	5	14.84	.581	11.26
29		3	5	15.24	.585	11.66
Means		3				16 50 11.503

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1. 1842.
				h. m. s.	*s.*	*h. m. s.*
Mar. 31	58 Herculis ε	3	5	16 54 16 46	+1.988	16 54 14.47
June 21		3	5	18.06	3.276	14 78
27		3	5	18.20	.358	14.84
29		3	5	18.16	.353	14.81
Means		3				16 54 14.725
June 21	60 Herculis	5	5	16 58 06.79	+3.532	16 58 03.26
27		5.6	5	06.46	.552	02.91
29		5.6	5	06.69	.554	03.14
Means		5.6				16 58 03.103
June 21	35 Ophiuchi η	3	5	17 01 23.35	+4.040	17 01 19.310
Jan. 22	22 Ursæ Min. ε	4	1	17 02 13.51	—8.784	17 02 22.29
23		4	1	14.05	.666	22.72
Feb. 19		4	1	17.48	4.957	22.44
Mar. 31		4	1	23.29	+1.192	22.10
May 25		4	2	27.77	5.714	22.06
June 27		4	3	27.22	4.581	22.64
29		4	3	26.49	.435	22.06
Means		4				17 02 22.330
June 21	29 Scorpii	7	5	17 04 28.72	+4.376	17 04 24.344
Mar. 31	36 Ophiuchi A	6	5	17 05 40.91	+2 552	17 05 38.36
May 25		6	5	42.37	3.972	38.40
Means		6				17 05 38.378
May 25	64 Herculis α	3.4	4	17 07 29.94	+3.246	17 07 26.69
June 21		3.4	5	30.34	.523	26.82
27		3.4	5	29.61	.541	26.07
29		3.4	5	30.16	.547	26 61
Means		3.4				17 07 26.548
Mar. 31	22 Draconis ζ	3	3	17 08 22.00	+1.519	17 08 20.481
Mar. 31	42 Ophiuchi θ	3.4	5	17 12 21.17	+2.516	17 12 18.65
May 25		3.4	5	22.67	3.849	18.82
June 21		3.4	5	23.16	4.328	18.83
27		3.4	5	23.05	.373	18.68
Means		3.4				17 12 18.745
Mar. 31	44 Ophiuchi b	5.6	5	17 16 46.14	+2.480	17 16 43.66
May 25		5.6	5	47.36	3.930	43.43

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
une 21	44 Ophiuchi *b*	5.6	5	17 16 47.99	+4.312	17 16 43.68
Means		.5.6				17 16 43.590
Mar. 31	2003 A. S. C.	6	5	17 20 02.09	+1.915	17 20 00.17
May 25		6.7	5	03.22	3.179	00.04
June 21		6	5	03.63	.467	00.16
Means		6				17 20 00.123
April 28	51 Ophiuchi *e*²	5	5	17 21 49.98	+3.280	17 21 46.700
May 25	Ophiuchi *h*	6.7	5	17 23 29.50	+3.365	17 23 26.135
Mar. 31	76 Herculis λ	4.5	5	17 24 23.09	+1.828	17 24 21.262
Mar. 31	55 Ophiuchi α	2	5	17 27 38.03	+1.951	17 27 36.08
April 28		2	5	38.77	2.686	36.08
May 25		2	5	39 33	3.229	36.10
June 21		2	5	39.88	.557	36.32
Means		2				17 27 36.145
Mar. 31	Scorpii κ	3	5	17 31 36.68	+2.765	17 31 33.92
April 28		3	5	37.27	3.714	33.56
May 25		3	5	38.29	4 475	33.82
June 21		3	5	39.03	.963	34.07
Means		3				17 31 33.843
June 21	58 Ophiuchi D	5.6	5	17 34 02.45	+4.265	17 33 58.185
Mar. 31	60 Ophiuchi β	3	5	17 35 42.24	+1.993	17 35 40.25
April 28		3	5	42.89	2.742	40.15
May 25		3	5	43.42	3.320	40.10
Means		3				17 35 40.167
June 21	3 Sagittarii *p*	5	5	17 37 41.90	+4.477	17 37 37.423
April 28	2042 A. S. C.	6	5	17 38 58.25	+3.433	17 38 54.82
May 25		5.6	4	59.10	4.145	54.95
Means		5.6				17 38 54.886
Mar. 31	62 Ophiuchi γ	4	5	17 40 00.27	+1.991	17 39 58.279
April 26	86 Herculis μ	4.5	5	17 40 18.90	+2.414	17 40 16.49
June 21		4	5	20.11	3.388	16.72
Means		4				17 40 16.604

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
April 28	87 Herculis	6	5	17 42 27.54	+2.496	17 42 25.04
May 25		5.6	5	27.95	3.081	24.87
Means		5.6				17 42 24.956
April 26	63 Ophiuchi z	6.7	5	17 45 13 86	+3.165	17 45 10.69
May 25		6.7	5	14.67	.917	10.75
Means		6.7				17 45 10.724
Mar. 31	2050 A. S. C.	7	5	17 47 16.03	+2.199	17 47 13.83
April 28		7	5	16.79	3.018	13.77
Means		7				17 47 13.801
Mar. 31	4 Sagittarii b	5.6	5	17 50 11.25	+2.313	17 50 08.94
April 26		5.6	5	11.98	3.123	08.86
28		5	5	11.99	.179	08.81
June 21		5	5	13.40	4.351	09.05
Means		5				17 50 08.915
May 25	93 Herculis E	5	5	17 53 04.75	+3.133	17 53 01.617
Mar. 31	69 Ophiuchi r	4.5	5	17 54 30.97	+2.054	17 54 28.92
April 28		5	5	31.54	.852	28.69
Means		4.5				17 54 28.802
April 26	10 Sagittarii γ^2	4	5	17 55 42.95	+3.270	17 55 39 680
Mar. 31	70 Ophiuchi p	5	5	17 57 30.35	+1.901	17 57 28.45
April 28		4.5	5	30.95	2.679	28.27
May 25		4.5	5	31.48	3.304	28.18
June 27		4.5	5	31.94	.838	28.10
Means		4.5				17 57 28.250
April 26	72 Ophiuchi S^2	3.4	5	17 59 53.99	+2.528	17 59 51.462
Mar. 31	103 Herculis o	4	5	18 01 24.47	+1.549	18 01 22.92
April 28		4	5	25.34	2.371	22.97
May 25		4.5	5	25.75	3.001	22.75
June 27		4	5	26.35	.427	22.92
Means		4				18 01 22.890
Mar. 31		3.4	5	18 04 21.12	+2.198	18 04 18.92
April 26		3.4	5	21.94	3.003	18.94
28	13 Sagittarii μ^1	3.4	5	21.94	.064	18.88

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
May 25	13 Sagittarii μ^1	3.4	5	18 04 22.99	+3.770	18 04 19.22
June 27	cont'd.	3.4	5	23.27	4.342	18.93
Means		3.4				18 04 18.978
Mar. 31		5.6	5	18 08 12.08	+2.278	18 08 09.80
April 28	Sagittarii *g*	5.6	5	12.82	3.188	09.63
June 27		5.6	5	14.51	4.554	09.96
Means		5.6				18 08 09.797
April 28	19 Sagittarii δ	3	5	18 10 56.23	+3.251	18 10 52.979
June 27	2106 A. S. C.	6	5	18 11 06.99	+4.196	18 11 02.794
May 25	105 Herculis G	5.6	5	18 12 43.88	+3.002	18 12 40.878
Mar. 31	20 Sagittarii ε	3	5	18 13 43.51	+2.394	18 13 41.12
April 26		3	5	44.39	3.310	41.08
Means		3				18 13 41.098
June 27	107 Herculis *t*	6	5	18 14 54.66	+3.427	18 14 51.233
Mar. 31		4	5	18 18 15.39	+2.195	18 18 13.20
April 26		4	5	16.07	3.040	13.03
28	22 Sagittarii λ	4	5	16.46	.102	13.36
29		4	5	16.36	.133	13.23
May 25		4	5	17.07	.864	13.21
Means		4				18 18 13.206
June 27	59 Serpentis *d*	6	5	18 19 11.23	+3.833	18 19 07.397
May 25	39 Draconis *b*	5	5	18 21 39.24	+2.820	18 21 36.420
Jan. 23		3	1	18 22 47.54	−27.771	18 23 15.31
24		3	1	47.86	.621	15.48
Feb. 20		3	1	55.93	20.581	16.51
21		3	1	55.03	.291	15.32
Mar. 31	23 Ursæ Min. δ	3	1	23 09.42	8.586	18.01
April 26		3	1	15.58	0.192	15.77
28		3	1	17.01	+0.386	16.62
29		3	1	16.90	.656	16.24
June 27		3	1	24.91	6.913	18.00
Means		3				18 23 16.362
April 28	1 Aquilæ	5	5	18 26 39.27	+2.715	18 26 36.55
29		5	5	39.15	.744	36.41
Means		5				18 26 36.480

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	s.	h. m. s.
April 28 29	2154 A. S. C.	7 7	5 5	18 29 31.14 31.08	+2.949 .978	18 29 28.19 28.10
Means		7				18 29 28.146
April 28 29	2 Aquilæ o	5.6 5.6	5 5	18 33 40.09 40.07	+2.697 .722	18 33 37 39 37.35
Means		5.6				18 33 37.370
April 28 29	4 Aquilæ	5.6 6	5 5	18 36 54.02 54.03	+2.509 .537	18 36 51.51 51.49
Means		5.6				18 36 51 502
April 28 29	30 Sagittarii	6.7 7	5 5	18 41 23.57 23.53	+2.916 .948	18 41 20.65 20.58
Means		6.7				18 41 20.618
April 28 29 May 27	34 Sagittarii σ	3 3 3	5 5 5	18 45 31.12 31.03 31.73	+2.992 3.025 .863	18 45 28.13 28.01 27.87
Means		3				18 45 28.003
April 29	64 Serpentis	6	5	18 49 22.32	+2.471	18 49 19.849
May 27	13 Aquilæ ε	3.4	5	18 52 30.63	+3.016	18 52 27.614
April 29	48 Draconis	5.6	5	18 54 06.56	+1.661	18 54 04.899
May 27	39 Sagittarii o	4.5	5	18 55 16.44	+3.674	18 55 12.766
April 29	17 Aquilæ ζ	3	5	18 58 11.14	+2.273	18 58 08.867
May 27	41 Sagittarii π	4.5	5	19 00 25.49	+3.533	19 00 21.957
May 27	20 Aquilæ B	6	5	19 04 09.67	+3.332	19 04 06.338
April 29 May 27	43 Sagittarii d	5 5.6	5 5	19 08 26.18 26.74	+2.741 3.628	19 08 23.44 23.11
Means		5				19 08 23.275
April 29 May 27	44 Sagittarii ρ	5 5	3 5	19 12 33.11 33.84	+2.696 3.526	19 12 30.41 30.32
Means		5				19 12 30.364

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr for prec., &c.	Mean AR Jan. 1, 1842.
				h. m. s.	*s.*	*h. m. s.*
April 29	30 Aquilæ δ	3.4	5	19 17 34.28	+2.326	19 17 31.95
May 27		3.4	5	35.16	3.096	32.06
Means		3.4				19 17 32.009
April 29	6 Vulpeculæ *b*	4	5	19 22 10.14	+1.997	19 22 08.14
30		4	5	10.07	2.046	08.03
Means		4				19 22 08.083
April 29	52 Sagittarii h^2	4.5	5	19 27 07.91	+2.762	19 27 05.15
30		4.5	5	08.05	.795	05.25
Means		4.5				19 27 05.201
May 27	39 Aquilæ κ	4	5	19 28 26.57	+3.230	19 28 23.340
April 29	44 Aquilæ σ	6	5	19 31 25.94	+2.215	19 31 23.78
30		5	5	25.92	.244	23.68
May 27		5	5	26.79	3.007	23.78
Means		5				19 31 23.730
April 29	6 Sagittæ δ	5	5	19 33 59.40	+2.031	19 33 57.37
30		5	5	59.25	.062	57.19
Means		5				19 33 57.278
May 27	50 Aquilæ γ	3	5	19 38 47.89	+2.902	19 38 44.988
May 27	57 Sagittarii	6	3	19 43 04.13	+3.423	19 43 00.707
April 29	53 Aquilæ α	1.2	5	19 43 06.50	+2.115	19 43 04.38
30		1.2	5	06.41	.144	04.27
Means		1.2				19 43 04.325
April 29	60 Aquilæ β	4	5	19 47 35.26	+2.122	19 47 33.14
30		4	5	35.24	.152	33.09
May 27		4	5	36.12	.924	33.20
Means		4				19 47 33.143
April 30	12 Sagittæ γ	4.5	5	19 51 45.83	+1.936	19 51 43.89
May 27		4.5	5	46.74	2.729	44.01
Means		4.5				19 51 43.952

REDUCTION TO MEAN RIGHT ASCENSIONS, JANUARY 1, 1842.

Date.	Star.	Mag.	No. of wires observed.	Obs'd App. AR.	Corr. for prec., &c.	Mean AR Jan 1 1842.
				h. m. s.	s.	h. m. s.
April 30 May 27	15 Vulpeculæ g	5 5.6	5 5	19 54 37.48 38.53	+1.796 2.616	19 54 35.68 35.91
Means		5				19 54 35.799
May 27	16 Sagittæ η	6	5	19 58 11.96	+2.694	19 58 09.266
May 27	67 Draconis ρ	5	5	20 02 07.70	+1.316	20 02 06.384
May 27	67 Aquilæ ρ	5	5	20 07 00.59	+2.718	20 06 57.872
April 30 May 27	6 Capricorni α^2	3 3	5 5	20 09 19.25 19.97	+2.320 3.251	20 09 16.93 16.72
Means		3				20 09 16.824
May 27	1 Cephei κ	4.5	3	20 14 07.59	+1.564	20 14 06.026
Feb. 22 May 27	Ursæ Min. λ	6 6	1 1	20 18 29.33 19 52.33	—87.309 5.531	20 19 56.64 57.86
Means		6				20 19 57.250
Feb. 23	76 Draconis	5	1	20 53 24.91	—5.844	20 53 30.754
Jan. 27 Feb. 23	8 Cephei β	3 3	4 3	21 26 31.78 31.93	—3.967 .887	21 26 35.75 35.82
Means		3				21 26 35.782
Mar. 25 26 April 21 22 May 15 16 18	35 Cephei γ	3 3 3 3 3 3 3	3 5 4 4 5 3 3	23 32 50.01 49.87 51.40 51.94 53.24 53.44 53.69	—5.315 .283 3.925 .848 1.879 .783 .591	23 32 55.32 55.15 55.32 55.79 55.12 55.22 55.28
Means		3				23 32 55.314

APPARENT RIGHT ASCENSION

OF THE

MOON'S OBSERVED LIMB.

Month and day.	Limb observed.	App. obs'd AR.			Month and day.	Limb observed.	App. obs'd AR.		
		h.	*m.*	*s.*			*h.*	*m.*	*s.*
Jan. 17	I	0	09	23.95	Mar. 25	I	11	51	03.49
18	I	0	55	35.65	26	II	12	49	24.81
19	I	1	44	44.77	27	II	13	46	34.42
21	I	3	36	08.75	28	II	14	45	10.27
22	I	4	39	11.49	29	II	15	44	54.19
23	I	5	45	52.03	31	II	17	43	38.42
24	I	6	53	44.64					
26	II	9	05	43.87	April 20	I	10	31	21.91
27	II	10	05	09.55	21	I	11	25	37.43
31	II	13	43	47.10	22	I	12	20	08.67
					23	I	13	15	55.16
Feb. 1	II	14	38	47.37	25	II	15	15	35.37
17	I	3	12	57.65	26	II	16	16	23.35
18	I	4	12	00.18	28	II	18	15	43.20
19	I	5	14	51.68	29	II	19	11	30.65
20	I	6	20	02.24	30	II	20	03	52.44
21	I	7	25	24.74					
22	I	8	29	05.97	May 18	I	11	06	44.96
23	I	9	30	08.14	25	II	17	49	38.50
24	I	10	28	33.64	27	II	19	41	41.92
24	II	10	30	53.56					
27	II	13	18	48.67	June 18	I	14	26	08.51
					19	I	15	24	08 60
Mar. 2	II	16	11	14.26	21	I	17	23	23.43
20	I	.6	58	42.02					

RIGHT ASCENSION OF THE CENTRE OF MERCURY.

Date.	Limb observed.	Time of semidiameter passing.	App. AR.			Diff. from Nautical Almanac.
		s.	*h.*	*m.*	*s.*	*s.*
April 29	I	0.17	1	48	15.19	+0.14
May 14	I	0.17	3	43	07.55	+0.74
16	I	0.17	4	00	58.97	—0.66
23	I	0.20	5	02	12.93	—0.38
31	Centre		6	03	35.88	—0.40
June 1	I	0.23	6	10	20.73	—0.44
12	I	0.30	7	08	25.20	±0.00

RIGHT ASCENSION OF THE CENTRE OF VENUS.

Date.	Limb observed.	Time of semidiameter passing.	App. AR.	Diff. from Nautical Almanac.
		s.	h. m. s.	s.
April 27	I	0.35	3 12 32.70	—0.43
28	I	0.35	3 17 29.92	—0.06
30	I	0.35	3 27 26.89	+0.90
May 1	I	0.35	3 32 27.28	+0.07
14	I	0.36	4 39 09.05	+0.67
16	I	0.37	4 49 37.89	—0.45
23	I	0.38	5 26 44.26	—0.59
31	I	0.40	6 09 32.65	—0.40
June 1	I	0.40	6 14 54.37	—0.14
12	I	0.41	7 13 28.83	+0.95

RIGHT ASCENSION OF THE CENTRE OF JUPITER.

Date.	Limb observed.	Time of semidiameter passing.	App. AR.	Diff. from Nautical Almanac.
		s.	h. m. s.	s.
April 29	I	1.49	19 37 15.57	—0.54
29	II	1.49	19 37 15.39	
30	I	1.50	19 37 23.36	—0.60
30	II	1.50	19 37 23.34	
May 27	I	1.62	19 35 57.79	—0.69

RIGHT ASCENSION OF THE CENTRE OF SATURN.

Date.	Limb observed.	Time of semidiameter passing.	App. AR.	Diff. from Nautical Almanac.
		s.	h. m. s.	s.
April 29			19 02 13.73	+0.78
May 27	I	0.62	18 58 26.92	+0.63

OCCULTATIONS
OF
STARS BY THE MOON.

Month and day.		Name of star.		Mag.	Mean time of observation.			Phase.	Power of telescope.	Remarks.
					h.	*m.*	*s.*			
January	17	45	Piscium	6	9	13	20.4	Im.	47	Good.
	21	*g*	Pleiadum	5.6	5	40	06.9	Im.	47	Good.
	21	*e*	Pleiadum	5	6	02	24.0	Im.	47	Good.
	21	*c*	Pleiadum	5	6	09	26.7	Im.	47	Good.
	21		Pleiadum	7.8	6	16	44.2	Im.	47	Good.
	21	*k*	Pleiadum	7	6	31	07.4	Im.	47	Good.
	21	*l*	Pleiadum	7	6	32	25.9	Im.	47	Good.
	21		Pleiadum	7	7	01	45.1	Im.	47	Good.
	24	ω^1	Geminorum	6	8	48	59.0	Im.	47	Good.
February	19	125	Tauri	6	13	31	47.5	Im.	47	Good.
March	29	A^1	Scorpii	5	14	53	17.8	Im.	47	Good.
June	11	d^2	Cancri	6	8	15	24.9	Im.	47	Good.
	12		Leonis	7	9	18	34.3	Im.	47	Good.

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1842.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
1	21 Andromedæ α	1	2	+28°13′	0 00 13.935	+3.071	+ .517	+ .074
2	88 Pegasi γ	2.3	2	+14 18	0 05 06.314	+3.078	+ .030	— .085
3	18 Cassiopeæ α	3	2	+55 40	0 31 34.713	+3.339	+ .593	+ .070
4	16 Ceti β	2.3	2	—18 52	0 35 39.308	+3.000	+ .090	+ .032
5	24 Cassiopeæ η	4	1	+56 58	0 39 34.864	+3.533	+1.268	
6	27 Cassiopeæ γ	3	1	+59 51	0 47 13.321	+3.531	+1.219	
7	79 Piscium ψ^2	6	1	+19 54	0 59 29.179	+3.190	+ .399	
8	1 Ursæ Min. α	2.3	4	+88 28	1 02 43.185	+16.708	+10.541	— .603
9	86 Piscium ζ^1	6	1	+ 6 44	1 05 28.513	+3.112	— .371	
10	89 Piscium f	6	2	+ 2 47	1 09 38.933	+3.087	— .101	
11	91 Piscium l	6	2	+27 55	1 12 23.862	+3.285	— .158	
12	45 Ceti θ^1	3	1	— 9 00	1 16 07.580	+3.001	+ .030	— .076
13	158 A. S. C.	7	2	+ 7 08	1 20 06.162	+3.124	+ .064	
14	99 Piscium η	4	2	+14 32	1 23 02.123	+3.189	— .035	
15	101 Piscium	6	1	+13 51	1 27 20.036	+3.189	+ .698	
16	105 Piscium	6	1	+15 36	1 31 09.957	+3.211	+ .175	
17	107 Piscium	6	1	+19 30	1 33 55.947	+3.255	+ .197	
18	110 Piscium ο	5	1	+ 8 22	1 37 03.226	+3.148	+ .050	
19	193 A. S. C.	6.7	1	+21 29	1 41 25.456	+3.291	+ .414	
20	6 Arietis β	3	1	+20 02	1 45 55.443	+3.283	+ .847	
21	8 Arietis ι	6	1	+17 02	1 48 43.766	+3.253	+ .080	
22	59 Ceti υ^2	4.5	1	—21 51	1 52 33.571	+2.816	+ .419	
23	13 Arietis α	3	1	+22 42	1 58 16.785	+3.346	+ .561	+ .074
24	15 Arietis	6	1	+18 45	2 01 52.819	+3.296	+ .767	
25	65 Ceti ξ^1	5	1	+ 8 06	2 04 37.939	+3.165	+ .449	
26	22 Arietis θ^1	6.7	1	+19 10	2 09 20.954	+3.315	+ .414	
27	48 Arietis ε	5	1	+20 42	2 50 11.674	+3.408	+ .618	
28	92 Ceti α	2.3	2	+ 3 28	2 54 01.701	+3.126	+ .301	+ .104
29	57 Arietis δ	4	2	+19 07	3 02 36.432	+3.398	+ .426	
30	2 Tauri ξ	4	1	+ 9 11	3 18 36.709	+3.231	+ .247	
31	5 Tauri f	5.6	1	+12 24	3 22 09.445	+3.263	+ .339	
32	11 Tauri	6	1	+24 49	3 31 20.745	+3.558	+ .389	
33	Fornacis τ	6	1	—28 28	3 32 13.515	+2.489	+ .007	
34	16 Pleiadum g	5.6	1	+23 47	3 35 25.380	+3.542	+ .476	
35	17 Pleiadum b	4.5	3	+23 37	3 35 30.257	+3.538	+ .291	
36	25 Tauri η	3	3	+23 37	3 38 06.237	+3.546	+ .481	+ .012
37	28 Eridani m^2	5	1	—24 22	3 40 52.250	+2.571	— .422	
38	426 A. S. C.	5	2	—38 06	3 42 46.000	+2.202	+ .266	
39	44 Persei ζ	3.4	1	+31 25	3 44 12 892	+3.742	+ .398	
40	32 Eridani	5	2	— 3 25	3 46 21.884	+3.001	+ .222	
41	33 Eridani l	5.6	1	—25 05	3 46 59.684	+2.545	+ .554	
42	34 Eridani γ^1	5	2	—13 58	3 50 39.702	+2.789	+ .286	+ .110
43	37 Tauri A^1	5	2	+21 39	3 55 21.736	+3.520	+ .416	
44	42 Tauri ψ	5.6	1	+28 34	3 57 15.501	+3.692	+ .657	
45	Eridani A	6.7	1	—28 05	3 59 06.785	+2.452	+ .671	
46	44 Tauri P	5.6	1	+26 04	4 01 13.511	+3.634	+ .683	
47	463 A. S. C.	7	1	+22 00	4 03 29.907	+3.538	+ .421	
48	39 Eridani	5	1	—10 39	4 06 52.916	+2.846	+ .184	
49	52 Tauri φ	6	1	+26 58	4 10 39.039	+3.670	+ .219	
50	63 Tauri	6	1	+16 24	4 14 21.581	+3.419	+ .443	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1842.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from— A. S. C.	Diff. in AR from— N. A.
					h. m. s.	s.	s.	s.
51	69 Tauri υ^1	5	1	+22°27′	4 16 51.325	+3.564	+ .417	
52	43 Eridani	4.5	1	—34 23	4 18 06.329	+2.242	+ .365	
53	87 Tauri α	1	3	+16 11	4 26 51.443	+3.427	+ .252	— .260
54	51 Eridani c	6	1	— 2 48	4 29 39.092	+3.007	+ .158	
55	92 Tauri σ^2	5.6	1	+15 36	4 30 14.421	+3.412	— .243	
56	94 Tauri τ	5	1	+22 39	4 32 46.098	+3.584	+ .180	
57	54 Eridani	4	1	—19 59	4 33 32.060	+2.616	+ .298	
58	Cœli Sculp. ϑ	5	1	—37 28	4 36 28.409	+2.111	+ .207	
59	552 A. S. C.	4.5	2	+66 04	4 38 24.727	+5.881	+1.895	
60	96 Tauri K	6	1	+15 36	4 40 42.387	+3.419	+ .939	
61	60 Eridani	6.7	1	—16 30	4 43 04.564	+2.694	+ .736	
62	7 Camelop. b	5	1	+63 29	4 44 38.816	+4.773	+ .490	
63	9 Orionis o^2	5	1	+13 16	4 47 29.666	+3.367	+ .532	
64	62 Eridani b	5	1	— 5 26	4 48 37.556	+2.947	+ .352	
65	10 Orionis s	5.6	1	+ 1 28	4 50 21.878	+3.100	+ .248	
66	63 Eridani	5	1	—10 30	4 52 21.808	+2.831	— .254	
67	102 Tauri ι	5 6	2	+21 22	4 53 39.553	+3.568	+ .577	
68	1 Leporis	6	1	—23 02	4 56 04.874	+2.522	+ .090	
69	104 Tauri m	5	2	+18 26	4 58 06.978	+3.542	— .216	
70	14 Orionis i	6	1	+ 8 17	4 59 17.126	+3.255	+ .166	
71	19 Orionis β	1	5	— 8 23	5 06 56.734	+2.878	+ .078	— .117
72	20 Orionis τ	4	1	— 7 01	5 09 56.162	+2.907	— .122	
73	626 A. S. C.	6	1	—13 42	5 10 24.912	+2.750		
74	6 Leporis λ	4.5	2	—13 21	5 12 17.810	+2.758	+ .334	
75	112 Tauri β	2	4	+28 28	5 16 18.650	+3.782	+ .308	+ .128
76	658 A. S. C.	7	1	—12 02	5 19 43.209	+2.787	+1.265	
77	9 Leporis β	4.5	2	—20 53	5 21 28.623	+2 565	+ .013	
78	34 Orionis δ	2	2	— 0 25	5 23 56.222	+3.061	+ .074	— .003
79	11 Leporis α	3.4	3	—17 56	5 25 45.833	+2.642	+ .211	— .013
80	46 Orionis ϵ	2.3	1	— 1 18	5 28 11.917	+3.040	+ .179	— .023
81	125 Tauri	6	3	+25 48	5 29 57.020	+3.708	+ .914	
82	Columbæ α	2	4	—34 10	5 33 55.823	+2.169	+ .327	— .032
83	129 Tauri	6.7	2	+15 45	5 37 40.660	+3.443	+ .714	
84	53 Orionis κ	3	2	— 9 44	5 40 15.896	+2.840	+ .296	
85	136 Tauri C	5.6	3	+27 34	5 43 24.020	+3 763	+ .384	
86	58 Orionis α	1	4	+ 7 22	5 46 37.260	+3.243	+ .176	+ .064
87	139 Tauri	5.6	1	+25 56	5 48 11.596	+3.717	+ .302	
88	59 Orionis	6	1	+ 1 49	5 50 12.308	+3.110	+ .668	
89	1 Geminorum H	5	1	+23 16	5 54 31.014	+3.642	+ .270	
90	62 Orionis χ^3	5	1	+20 08	5 54 32.385	+3.558	+ .139	
91	17 Leporis ρ	5 6	1	—16 29	5 57 56.206	+2.673	+ .360	
92	5 Geminorum	7	1	+24 27	6 01 51.050	+3.676	+ .388	
93	1 Lyncis α	5	1	+61 33	6 03 20.838	+5.535	+ .798	
94	7 Geminorum η	4.5	1	+22 33	6 05 20.553	+3.623	+ .507	
95	2 Lyncis b	4.5	1	+59 03	6 05 41.177	+5.297	+ .893	
96	75 Orionis l	6	1	+10 00	6 08 23.399	+3.303	— .377	
97	11 Geminorum	8	1	+23 32	6 09 42.149	+3.649	+ .521	
98	13 Geminorum μ	3	2	+22 35	6 13 24.157	+3.626	+ .471	+.088
99	3 Canis Maj. λ	4	1	—33 22	6 16 20.419	+2.191	+ .217	
100	16 Geminorum	7	1	+20 35	6 18 32.896	+3.569	+ .398	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1842.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
101	51 (Hev.) Cephei	5	8	+87°16′	6 24 26.220	+30.849		— .752
102	24 Geminorum γ	3	2	+16 32	6 28 34.864	+3.462	+ .310	
103	54 Aurigæ	6	1	+28 21	6 29 35.101	+3.785	+ .221	
104	25 Geminorum	7.8	2	+28 20	6 31 23.301	+3.782	+ .637	
105	27 Geminorum ε	3	2	+25 17	6 34 12.521	+3.693	+ .315	
106	28 Geminorum	6	1	+29 07	6 34 44.056	+3.805	— .044	
107	9 Canis Maj. α	1	7	—16 30	6 38 11.101	+2.646	+ .095	— .106
108	Arg. in pup.	5	1	—37 4-	6 42 02.928	+2.031		
109	36 Geminorum *d*	6	3	+21 57	6 42 04.817	+3.598	+ .221	
110	849 A. S. C.	5	2	—34 11	6 45 07.584	+2.178	+ .108	
111	38 Geminorum b^1	5.6	1	+13 22	6 45 44.005	+3.380	+ .555	
112	39 Geminorum y^1	6.7	1	+26 17	6 49 03.022	+3.714	+ .814	
113	20 Canis Maj. ι	4.5	4	—16 51	6 49 05.518	+2.673	+ .342	
114	21 Canis Maj. ε	2.3	4	—28 46	6 52 25.032	+2.356	+ .192	— .065
115	42 Geminorum ω^1	6	1	+24 26	6 52 47.149	+3.660	+ .499	
116	43 Geminorum ζ	4	2	+20 48	6 54 44.064	+3.562	+ .110	
117	22 Canis Maj. σ	4	2	—27 43	6 55 25.697	+2.387	+ .293	
118	45 Geminorum ο	[illegible]	1	+16 11	6 59 18.278	+3.444	+ .280	
119	46 Geminorum τ	5	2	+30 30	7 01 04.765	+3.829	+ .457	
120	20 Monocerotis	5.6	1	— 4 00	7 02 22.737	+2.979	— .011	
121	886 A. S. S.	6	1	—24 59	7 03 12.216	+2.469	— .212	
122	51 Geminorum	5	1	+16 25	7 01 17.865	+3 447	+ .241	
123	53 Geminorum *z*	6	2	+28 10	7 06 04.841	+3.755	+ .561	
124	893 A. S. C.	7.8	1	+16 25	7 07 40.617	+3.446	+ .215	
125	55 Geminorum δ	3.4	4	+22 16	7 10 41.032	+3.592	+ .323	+ .045
126	910 A. S. C.	6	1	—25 36	7 14 35.061	+2.462	+ 530	
127	59 Geminorum	6.7	3	+27 56	7 14 43 360	+3.741	+ .468	
128	31 Canis Maj. η	3	1	—29 00	7 17 50.675	+2.370	+ .605	
129	3 Canis Min. β	3	3	+ 8 36	7 18 34 843	+3.259	+ .525	
130	924 A. S. C.	6.7	4	—28 50	7 21 42.997	+2.379	+ .089	
131	8 Canis Min. δ^2	5.6	2	+ 3 37	7 24 54.700	+3.148	+ .554	
132	69 Geminorum υ	5	3	+27 15	7 26 11.000	+3.709	+ .172	
133	Arg. in pup. n^1	6	1	—23 08	7 27 37.812	+2.539	— .206	
134	10 Canis Min. α	1.2	6	+ 5 37	7 31 01.648	+3.145	+ .066	+ .009
135	77 Geminorum κ	4	1	+24 46	7 34 54.336	+3 634	+ .948	
136	78 Geminorum β	2	5	+28 24	7 35 38.468	+3.683	+ .492	+ .060
137	82 Geminorum B	7	2	+23 32	7 39 06.463	+3.598	+ .697	
138	7 Argus ξ	4	1	—24 28	7 42 39.005	+2.520	+ .075	
139	13 Canis Min. ζ	5.6	1	+ 2 10	7 43 30.253	+3.114	+ .385	
140	Arg. in pup. *b*	5	1	—38 27	7 47 03.502	+2.121	+ .640	
141	2 Cancri ω^1	6.7	1	+25 49	7 51 22.001	+3.641	+ .779	
142	8 Cancri	6	1	+13 34	7 56 16.519	+3.351	+ .567	
143	15 Argus	3.4	1	—23 51	8 00 49.184	+2.559	+ .656	— .010
144	16 Cancri ζ	6.7	1	+18 07	8 03 09.003	+3.445	+ .613	
145	17 Cancri β	4	1	+ 9 40	8 07 56.849	+3.262	+ .665	
146	1013 A. S. C.	6.7	1	+21 15	8 11 07.954	+3.506	+ .992	
147	20 Cancri d^1	6	1	+18 50	8 14 18.941	+3.449	+ .013	
148	31 Cancri θ	5.6	1	+18 37	8 22 34.931	+3.436	+ .729	
149	4 Ursæ Maj. π^2	5	1	+64 52	8 26 19.607	+5.368	— .149	
150	6 Hydræ	5.6	1	—11 55	8 32 32.430	+2.847	+ .436	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1842.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
151	47 Cancri δ	4.5	3	+18°44′	8 35 42.107	+3.422	+ .533	
152	11 Hydræ ε	4	2	+ 7 00	8 38 24.360	+3.197	+ .148	— .057
153	54 Cancri	6.7	2	+15 56	8 42 13.296	+3.359	+ .728	
154	55 Cancri ρ^2	6	1	+28 56	8 43 10.556	+3.630	+ .046	
155	1086 A. S. C.	7	1	+17 58	8 44 17.218	+3.396	— .024	
156	58 Cancri ρ^4	6	2	+28 32	8 46 11.384	+3.614	+ .746	
157	62 Cancri o^1	6	2	+15 56	8 48 25.745	+3.352	+ .481	
158	65 Cancri α^2	5	2	+12 28	8 49 50.394	+3.287	+ .280	
159	69 Cancri ν	6	1	+25 04	8 53 29.464	+3.525	+ .414	
160	18 Hydræ ω	6	2	+ 5 43	8 57 38.901	+3.165	— .059	
161	1112 A. S. C.	5.6	2	—25 13	9 01 06.754	+2.625	+ .364	
162	22 Hydræ θ	4.5	1	+ 2 59	9 06 08.423	+3.117	+ .219	
163	24 Hydræ	6	2	— 8 05	9 08 56.961	+2.940	+ .031	
164	83 Cancri q	7	1	+18 22	9 10 09.450	+3.369	+ .282	
165	27 Hydræ	5.6	2	— 8 53	9 12 46.097	+2.929	+ .179	
166	Pixid Naut. θ	5	1	—25 18	9 14 29.644	+2.650	— .196	
167	Pixid Naut. λ	5.6	2	—28 10	9 16 22.030	+2.599	— .278	
168	30 Hydræ α	2	3	— 7 59	9 19 49.430	+2.950	+ .364	— .040
169	5 Leonis ξ	5.6	3	+11 59	9 23 25.567	+3.249	+ .099	
170	7 Leonis	7	1	+15 05	9 27 14.501	+3.292	+ .387	
171	14 Leonis ο	4	5	+10 37	9 32 42.784	+3.219	+ .414	
172	17 Leonis ε	3	5	+24 30	9 36 52.438	+3.427	+ .440	+ .055
173	29 Ursæ Maj. υ	4.5	2	+59 47	9 39 42.123	+4.356	— .499	
174	30 Ursæ Maj. φ	5	2	+54 48	9 41 19.004	+4.153	— .312	
175	6 Sextantis t	7	1	— 3 30	9 43 16.332	+3.023	+ .246	
176	24 Leonis μ	3	1	+26 45	9 43 45.866	+3.448	+ .370	
177	9 Sextantis	7	3	+ 5 41	9 45 50.797	+3.143	+ .071	
178	27 Leonis ν	5.6	1	+13 12	0 49 43.157	+3.238	+ .341	
179	11 Sextantis	6	2	+ 9 04	9 49 44.998	+3.184	+ .260	
180	29 Leonis π	4.5	1	+ 8 48	9 51 51.272	+3.179	— .196	
181	1198 A. S. C.	6.7	1	+22 43	9 53 59.731	+3.362	+ .137	
182	1199 A. S. C.	7.8	2	—12 32	9 54 53.540	+2.914	— .238	
183	1202 A. S. C.	7	1	+16 31	9 57 06.155	+3.272	+ .161	
184	32 Leonis α	1	4	+12 44	9 59 57.165	+3.221	+ .216	— .041
185	1215 A. S. C.	6	1	— 6 32	10 03 24.281	+2.994		
186	1220 A. S. C.	6	1	+18 31	10 07 39.278	+3.281	+ .626	
187	37 Leonis	6	1	+14 31	10 08 11.497	+3.232	— .117	
188	41 Leonis γ	2	2	+20 38	10 11 15.281	+3.300	+ .671	
189	43 Leonis z	6.7	2	+ 7 21	10 14 44.168	+3.145	— .012	
190	42 Hydræ μ	4	2	—16 02	10 18 26.912	+2.903	+ .226	
191	28 Sextantis k	6	1	— 1 56	10 21 27.250	+3.050	+ .430	
192	1249 A. S. C.	5.6	1	—28 51	10 22 11.575	+2.762	+ .101	
193	30 Sextantis l	6	1	+ 0 10	10 22 12.659	+3.070	— .061	
194	47 Leonis ρ	4	1	+10 07	10 24 29.268	+3.166	+ .136	
195	37 Ursæ Maj. m	5	1	+57 54	10 24 56.170	+3.935	+ .110	
196	48 Leonis	5.6	1	+ 7 46	10 26 33.415	+3.141	+ .443	
197	1 Hyd. & Crat.	6	1	—15 32	10 28 33.903	+2.924	— .035	
198	34 Sextantis	6	2	+ 4 25	10 34 27.686	+3.106	+1.294	
199	35 Sextantis	6	1	+ 5 35	10 35 08.693	+3.116	+ .541	
200	52 Leonis k	6	2	+15 02	10 38 02.728	+3.195	+ .118	

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
201	3 Hyd. & Crat. b^1	6	1	—16°28′	10 39 07.890	+2.931	+ .298	
202	41 Sextantis r	6	2	— 8 04	10 42 22.453	+3.005	+ .003	
203	6 Hyd. & Crat. b^3	5.6	4	—19 17	10 45 45.973	+2.919	+ .155	
204	57 Leonis	7	1	+ 1 17	10 48 04.063	+3.078	— .053	
205	1299 A. S. C.	5	3	—36 17	10 49 22.093	+2.769	— .005	
206	48 Ursæ Maj. β	2	1	+57 14	10 52 15.807	+3.680	— .153	
207	58 Leonis d	5	2	+ 4 28	10 52 23.925	+3.099	+ .257	
208	50 Ursæ Maj. α	1.2	3	+62 36	10 53 55.503	+3.803	+ .059	+ .055
209	63 Leonis χ	4.5	4	+ 8 12	10 56 51.850	+3.086	+ .568	
210	9 Hyd. & Crat. χ^1	5	2	—26 26	10 57 43.867	+2.889	+ .079	
211	67 Leonis	6	3	+25 31	11 00 19.867	+3.234	+ .169	
212	10 Hyd. & Crat.	5	1	—27 13	11 01 05.861	+2.892	— .123	
213	68 Leonis δ	3	5	+21 23	11 05 41.842	+3.193	+ .416	+ .032
214	74 Leonis ϕ	5	2	— 2 47	11 08 37.772	+3.054	+ .504	
215	12 Hyd. & Crat. δ	3.4	6	—13 55	11 11 26.797	+3.001	+ .067	— .108
216	77 Leonis σ	4	1	+ 6 54	11 12 59.480	+3.071	+ .858	
217	13 Hyd. & Crat. λ	6	4	—17 54	11 15 32.260	+2.984	— .278	
218	16 Hyd. & Crat. κ	6	4	—11 29	11 19 12.238	+3.020	+ .368	
219	87 Leonis e	4.5	4	— 2 08	11 22 14.648	+3.060	+ .078	
220	19 Hyd. & Crat. ξ	4	3	—30 59	11 25 14.783	+2.945	+ .673	
221	21 Hyd. & Crat. θ	4.5	2	— 8 56	11 28 40.265	+3.039	+ .387	
222	91 Leonis υ	4.5	3	+ 0 03	11 28 51.693	+3.068	+ .367	
223	27 Hyd. & Crat. ζ	4	1	—17 28	11 36 45.469	+3.025	+ .239	
224	2 Virginis ξ^1	5	3	+ 9 08	11 37 07.993	+3.090	+ .623	
225	94 Leonis β	2.3	7	+15 27	11 40 59.636	+3.066	+ .086	— .198
226	5 Virginis β	3.4	2	+ 2 39	11 42 27.657	+3.124	— .011	
227	64 Ursæ Maj. γ	2	7	+54 34	11 45 29.584	+3.189	+ .498	+ .139
228	1383 A. S. C.	7	1	+ 4 22	11 50 07.990	+3.073	+ .174	
229	Virginis	7	1	— 0 5-	11 51 28.806	+3.067		
230	1 Comæ Ber.	6.7	1	+22 59	11 53 38.299	+3.085	+ .739	
231	1390 A. S. C.	7	2	+ 6 27	11 55 40.398	+3.071	— .424	
232	1393 A. S. C.	7	1	— 2 15	11 57 54.474	+3.067	— .010	
233	1 Corvi α	4.5	2	—23 51	12 00 16.474	+3.067	+ .150	
234	10 Virginis r	6	1	+ 2 47	12 01 35.457	+3.068	+ .251	
235	4 Comæ Ber.	6	2	+26 45	12 03 49.855	+3.059	+ .117	
236	5 Comæ Ber.	6	1	+21 25	12 04 06.849	+3.060	+ .499	
237	69 Ursæ Maj. δ	3	2	+57 55	12 07 34.952	+3.003	+1.336	
238	7 Comæ Ber. h	5	1	+24 49	12 08 20.552	+3.047	+ .198	
239	15 Virginis η	3.4	3	+ 0 13	12 11 49.367	+3.068	— .079	
240	6 Corvi ι	5.6	1	—23 58	12 15 08.539	+3.106	+ .127	
241	15 Comæ Ber. c	5	2	+29 09	12 19 03.622	+3.008	+ .646	
242	19 Virginis	8	1	+10 36	12 22 32.397	+3.044	+ .679	
243	21 Virginis q	5.6	3	— 8 35	12 25 37.860	+3.090	+ .170	
244	9 Corvi β	2.3	1	—22 31	12 26 06.000	+3.133	+ .638	+ .030
245	Hyd. & Crat. d	5.6	4	—26 16	12 29 20.455	+3.150	+ .395	
246	29 Virginis γ^1	3	4	— 0 35	12 33 39.508	+3.022	+ .454	
247	33 Virginis	6	3	+10 26	12 38 21.037	+3.027	+ .338	
248	30 Comæ Ber.	6	2	+28 25	12 41 35.364	+2.939	+ .406	
249	1480 A. S. C.	7	1	— 9 28	12 43 09.949	+3.109	+ .151	
250	35 Comæ Ber.	5	1	+22 07	12 45 31.022	+2.962	+ .228	

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							A. S. C.	N. A.
					h. m. s.	s.	s.	s.
251	40 Virginis ψ	5.6	3	— 8°41′	12 46 08.660	+3.108	+ .034	
252	36 Comæ Ber. r	5	2	+18 16	12 51 06.566	+2.971	+ .544	
253	38 Comæ Ber.	6	2	+17 59	12 53 20.749	+2.969	+ .671	
254	47 Virginis ε	3.4	1	+11 49	12 54 18.751	+3.003	— .055	
255	48 Virginis k^4	6 7	1	— 2 49	12 55 46.267	+3.083	+ .391	
256	1502 A. S. C.	7	1	—14 04	12 58 07.281	+3.151	+ .099	
257	Virginis	7	1	—14 0–	12 58 32.969	+3.152		
258	39 Comæ Ber. t	6	1	+22 00	12 58 39.053	+2.932	+ .179	
259	49 Virginis g	6	1	— 9 54	12 59 37.663	+3.127	— .001	
260	51 Virginis θ	4.5	3	— 4 42	13 01 46.513	+3.097	— .001	
261	55 Virginis	6	5	—19 06	13 05 44.312	+3.197	— .062	
262	58 Virginis	7	4	— 9 43	13 09 10.910	+3.135	+ .130	
263	60 Virginis σ	5.6	1	+ 6 18	13 09 37.593	+3.024	+ .265	
264	62 Virginis	7	5	—10 23	13 12 02.564	+3.143	— .022	
265	67 Virginis α	1	4	—10 20	13 16 52.685	+3.151	+ .187	+ .033
266	70 Virginis w	5.6	2	+14 38	13 20 42.206	+2.948	— .070	
267	75 Virginis	6	3	—14 33	13 24 25.757	+3.191	+ .465	
268	Hydræ con. f	6	3	—25 41	13 28 03.453	+3.307	— .401	
269	1 Bootis	6	3	+20 45	13 33 07.777	+2.868	+ .751	
270	85 Virginis	6	4	—14 58	13 37 05.312	+3.213	+ .566	
271	2 Centauri g	5	1	—41 41	13 40 18.927	+3.442	+ .183	
272	89 Virginis x	5.6	4	—17 20	13 41 17.970	+3.245	+ .330	
273	4 Centauri h	5	2	—31 09	13 44 08.183	+3.419	+ .115	
274	8 Bootis η	3	2	+19 12	13 47 09.666	+2.861	+ .166	— .062
275	4 Hydræ con. S²	6	3	—24 14	13 51 10.243	+3.346	— .099	
276	11 Bootis	6	4	+28 09	13 54 00.668	+2.728	+1.062	
277	5 Centauri θ	2.3	4	—35 25	13 57 24.618	+3.491	— .364	
278	96 Virginis y	7	2	— 9 35	14 00 36.125	+3.180	+ .475	
279	1610 A. S. C.	5.6	2	—15 33	14 02 13.432	+3.255	+ .662	
280	98 Virginis κ	4	5	— 9 32	14 04 28.640	+3.183	+ .084	
281	16 Bootis α	1	6	+20 00	14 08 27.443	+2.733	+ .369	+ .011
282	100 Virginis λ	4.5	5	—12 38	14 10 34.278	+3 228	+ .282	
283	7 Hydræ con.	6	2	—27 02	14 14 00.541	+3.442	+ .217	
284	2 Libræ	6	1	—10 59	14 14 56.011	+3.211	+ .839	
285	8 Hydræ con.	5.6	3	—28 46	14 18 56.387	+3.483	+ .081	
286	25 Bootis ρ	4	2	+31 04	14 25 01.253	+2.592	+ .039	
287	Centauri η	3	1	—41 27	14 25 30.411	+3.764	+ .243	
288	1651 A. S. C.	6.7	4	—11 38	14 28 36.010	+3.233	—2.376	
289	29 Bootis π	4.5	4	+17 06	14 33 18.143	+2.813	+ .777	
290	30 Bootis ζ	3.4	1	+14 25	14 33 36.104	+2.855	+ .374	
291	36 Bootis ε	3	7	+27 45	14 38 05.230	+2.623	+ .486	— .015
292	9 Libræ α²	3	9	—15 23	14 42 08.894	+3.309	— .090	— .028
293	12 Libræ	6	4	—23 59	14 45 10.500	+3.458	+ .154	
294	1690 A. S. C.	6	5	—20 41	14 48 15.278	+3.404	+3.280	
295	14 Libræ	8	1	—24 48	14 48 18.314	+3.479	+ .276	
296	7 Ursæ Min.	3	9	+74 48	14 51 13.899	—0.273	— .065	— .507
297	20 Libræ	3.4	8	—24 39	14 54 50.332	+3.490	+ .302	
298	22 Libræ ν²	6.7	5	—15 52	14 58 00.484	+3.333	+ .648	
299	45 Bootis c	5	3	+25 29	15 00 21.830	+2.617	+ .936	
300	46 Bootis b	6	4	+26 55	15 01 34.565	+2.585	+ .355	

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								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
301	24 Libræ	ι^1	5.6	4	—19°11′	15 03 13.630	+3.400	— .110	
302	26 Libræ	τ	7	3	—17 10	15 05 39.267	+3.365	— .043	
303	27 Libræ	β	2.3	10	— 8 48	15 08 30.752	+3 222	+ .122	+ .025
304	29 Libræ	o^1	7	5	—14 58	15 12 11.996	+3.332	+ .028	
305	6 Serpentis		6	1	+ 1 18	15 12 59.701	+3.015	+1.331	
306	31 Libræ	ε	5.6	4	— 9 45	15 15 38.542	+3.240	+ .142	
307	32 Libræ	ζ^1	6	4	—16 09	15 19 21.340	+3.362	— .154	
308	35 Libræ	ζ^4	6	2	—16 19	15 24 00.117	+3.370	+ .447	
309	5 Cor. Bor.	α	2	11	+27 15	15 27 59.938	+2.528	+ .514	+ .016
310	43 Libræ	κ	5	8	—19 10	15 32 51.285	+3.438	+ .159	
311	24 Serpentis	α	2.3	10	+ 6 56	15 36 29.379	+2.939	+ .223	+ .067
312	32 Serpentis	μ	3.4	2	— 2 36	15 41 22.862	+3.124	+ .014	
313	1 Scorpii	b	5	8	—25 16	15 41 29.360	+3.585	+ .420	
314	2 Scorpii	A^1	5	8	—24 51	15 44 08.289	+3.579	+ .531	
315	Scorpii	f^2	6	1	—23 30	15 44 32.334	+3.549	+ .006	
316	5 Scorpii	ρ	4	1	—28 45	15 47 08.582	+3.679	+ .134	
317	6 Scorpii	π	3.4	2	—25 39	15 49 18.187	+3.606	— .115	
318	16 Ursæ Min.	ζ	4	10	+78 17	15 49 50.406	—2.360	+ .870	+ .043
319	7 Scorpii	δ	3	2	—22 10	15 51 00.120	+3.527	— .004	
320	3 Herculis		6	1	+ 4 52	15 53 00.827	+2.971	+ .275	
321	1829 A. S. C.		6	1	—25 25	15 53 48.468	+3.607	+ .144	
322	8 Scorpii	β^1	2	10	—19 22	15 56 15.548	+3.474	+ .794	+ .026
323	Scorpii	m	6	1	—25 54	15 58 30.464	+3.626	+ .512	
324	13 Draconis	θ	4	1	+58 59	15 59 56.029	+1.147	—1.345	
325	45 Serpentis	g^1	6	2	+10 19	16 00 05.182	+2.857	+ .318	
326	46 Serpentis	g^2	7	4	+10 31	16 00 34.053	+2.853	+ .327	
327	13 Scorpii	c^2	5	1	—27 31	16 02 34.977	+3.673	— .549	
328	14 Scorpii	ν	5	1	—19 02	16 02 49.406	+3.469	— .022	
329	15 Scorpii	χ	5	3	— 9 39	16 03 21.987	+3.265	— .033	
330	1 Ophiuchi	δ	3	8	— 3 17	16 06 04.239	+3.138	+ .277	— .069
331	20 Scorpii	σ	4	5	—25 12	16 11 35.810	+3 626	+ .238	
332	20 Herculis	γ	4	6	+19 32	16 14 57.213	+2.643	+ .297	
333	5 Ophiuchi	g	6.7	1	—23 04	16 16 07.226	+3.578	+ .080	
334	21 Scorpii	α	1	9	—26 05	16 19 43.796	+3 663	— .166	— .021
335	14 Draconis	η	3	12	+61 52	16 21 51.885	+0.795	+ .877	+ .208
336	29 Herculis	h	4.5	1	+11 50	16 25 12.584	+2.811	— .368	
337	23 Scorpii	τ	3.4	3	—27 53	16 26 03.430	+3.715	— .030	
338	33 Herculis		7.8	4	+ 7 26	16 29 11.278	+2.907	+ .484	
339	24 Scorpii		5	4	—17 26	16 32 26.568	+3.456	+ .136	
340	25 Scorpii		7	2	—25 14	16 37 11.411	+3.656	— .471	
341	18 Ophiuchi	u	6	2	—24 21	16 40 07.912	+3.635	— .008	
342	21 Ophiuchi		6	4	+ 1 30	16 43 24.300	+3.035	+ .110	
343	25 Ophiuchi	ι	4	2	+10 26	16 46 32.060	+2.834	+ .132	
344	1934 A. S. C.		7	1	—16 33	16 46 54.914	+3.444	+ .366	
315	27 Ophiuchi	κ	3	3	+ 9 38	16 50 11.503	+2.852	— .061	
346	58 Herculis	ε	3	4	+31 10	16 54 14.725	+2.293	+ .389	
347	60 Herculis		5.6	3	+12 58	16 58 03.103	+2.771	+ .041	
348	35 Ophiuchi	η	3	1	—15 31	17 01 19.310	+3.426	+ .048	
349	22 Ursæ Min.	ε	4	7	+82 17	17 02 22.330	—6.544	+3.652	+ .172
350	29 Scorpii		7	1	—26 47	17 04 24.344	+3.722	— .020	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1842.

No.	Star.		Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
								A. S. C.	N. A.
						h. m. s.	s.	s.	s.
351	36 Ophiuchi	A	6	2	—26°21′	17 05 38.378	+3.671	— .294	
352	64 Herculis	α	3.4	4	+14 35	17 07 26.548	+2.732	+ .216	— .212
353	22 Draconis	ζ	3	1	+65 55	17 08 20.481	+0.153	+ .475	
354	42 Ophiuchi	θ	3.4	4	—24 50	12 12 18.745	+3.672	+ .141	
355	44 Ophiuchi	b	5.6	3	—24 01	17 16 43.590	+3.652	— .044	
356	2003 A. S. C.		6	3	+20 13	17 20 00.123	+2.583	+ .447	
357	51 Ophiuchi	c²	5	1	—23 50	17 21 46.700	+3.649	— .398	
358	Ophiuchi	h	6.7	1	+ 2 51	17 23 26.135	+3.002	+ .061	
359	76 Herculis	λ	4.5	1	+26 14	17 24 21.262	+2.417	+ .158	
360	55 Ophiuchi	α	2	4	+12 41	17 27 36.145	+2.773	+ .351	+ .036
361	Scorpii	κ	3	4	—38 56	17 31 33.843	+4.139	+ .135	
362	58 Ophiuchi	D	5.6	1	—21 36	17 33 58.185	+3.593	— .061	
363	60 Ophiuchi	β	3	3	+ 4 38	17 35 40.167	+2.960	+ .227	
364	3 Sagittarii	p	5	1	—27 46	17 37 37.423	+3.768	+ .707	
365	2042 A. S. C.		5.6	2	—31 38	17 38 54:886	+3.887	+ .062	
366	62 Ophiuchi	γ	4	1	+ 2 46	17 39 58.279	+3.003	+ .243	
367	86 Herculis	μ	4	2	+27 49	17 40 16.604	+2.366	+ .382	
368	87 Herculis		5.6	2	+25 41	17 42 24.956	+2.427	+ .602	
369	63 Ophiuchi	z	6.7	2	—24 51	17 45 10.724	+3.685	+ .064	
370	2050 A. S. C.		7	2	—15 47	17 47 13.801	+3.445	+ .131	
371	4 Sagittarii	b	5	4	—23 48	17 50 08.915	+3.656	+ .083	
372	93 Herculis	E	5	1	+16 46	17 53 01.617	+2.666	+ .975	
373	69 Ophiuchi	τ	4.5	2	— 8 10	17 54 28.802	+3.260	+ .452	
374	10 Sagittarii	γ²	4	1	—30 25	17 55 39.680	+3.852	— .234	
375	70 Ophiuchi	p	4.5	4	+ 2 32	17 57 28.250	+3.009	+ .222	
376	72 Ophiuchi	S²	3.4	1	+ 9 33	17 59 51.462	+2.843	+ .186	
377	103 Herculis	ο	4	4	+28 45	18 01 22.890	+2.335	+ .300	
378	13 Sagittarii	μ¹	3.4	5	—21 06	18 04 18.978	+3.586	+ .336	+ .086
379	Sagittarii	g	5.6	3	—27 06	18 08 09.797	+3.751	+ .145	
380	19 Sagittarii	δ	3	1	—29 53	18 10 52.979	+3.835	+ .529	
381	2106 A. S. C.		6	1	—15 52	18 11 02.794	+3.447	+ .280	
382	105 Herculis	G	5.6	1	+24 23	18 12 40.878	+2.463	+ .832	
383	20 Sagittarii	ε	3	2	—34 27	18 13 41.098	+3.983	— .018	
384	107 Herculis	t	6	1	+28 48	18 14 51.233	+2.335	+ .303	
385	22 Sagittarii	λ	4	5	—25 30	18 18 13.206	+3.704	— .038	
386	59 Serpentis	d	6	1	+ 0 07	18 19 07.397	+3.066	+ .015	
387	39 Draconis	b	5	1	+58 43	18 21 36.420	+0.880	+ .230	
388	23 Ursæ Min.	δ	3	9	+86 36	18 23 16.362	—19.242	+6.427	—1.618
389	1 Aquilæ		5	2	— 8 21	18 26 36.480	+3.263	+ .354	
390	2154 A. S. C.		7	2	—21 10	18 29 28.146	+3.582	— .158	
391	2 Aquilæ	o	5.6	2	— 9 12	18 33 37.370	+3.282	+ .136	
392	4 Aquilæ		5 6	2	+ 1 54	18 36 51.502	+3.024	+ .034	
393	30 Sagittarii		6.7	2	—22 20	18 41 20.618	+3.609	+ .180	
394	34 Sagittarii	σ	3	3	—26 29	18 45 28.003	+3.722	+ .049	
395	64 Serpentis		6	1	+ 2 20	18 49 19.849	+3.015	+ .079	
396	13 Aquilæ	ε	3.4	1	+14 52	18 52 27.614	+2.723	+1.168	
397	48 Draconis		5.6	1	+57 36	18 54 04.899	+1.021	+ .937	
398	39 Sagittarii	ο	4 5	1	—21 58	18 55 12.766	+3.592	+ .162	
399	17 Aquilæ	ζ	3	1	+13 38	18 58 08.867	+2.757	+ .435	— .032
400	41 Sagittarii	π	4.5	1	—21 16	19 00 21.957	+3.571	+ .175	

CATALOGUE OF STARS OBSERVED AT WASHINGTON IN 1842.

No.	Star.	Mag.	No. of obs.	Declination.	Mean AR, Jan. 1.	Annual variation.	Diff. in AR from—	
							A.S C.	N. A
					h. m. s.	s.	s.	s.
401	20 Aquilæ B	6	1	— 8°12′	19 04 06.838	+3.254	+ .270	
402	43 Sagittarii *d*	5	2	—19 14	19 08 23.275	+3.514	+ .257	
403	44 Sagittarii ρ^1	5	2	—18 08	19 12 30.364	+3.485	— .176	
404	30 Aquilæ δ	3.4	2	+ 2 48	19 17 32.009	+3.009	+ .583	+ .185
405	6 Vulpeculæ *b*	4	2	+24 21	19 22 08.083	+2.502	+ .759	
406	52 Sagittarii h^2	4.5	2	—25 13	19 27 05.201	+3.654	+ .303	
407	39 Aquilæ κ	4	1	— 7 22	19 28 23.340	+3.229	+ .062	
408	44 Aquilæ σ	5	3	+ 5 03	19 31 23.730	+2.960	+ .400	
409	6 Sagittæ β	5	2	+17 07	19 33 57.278	+2.691	+ .346	
410	50 Aquilæ γ	3	1	+10 14	19 38 44.988	+2.851	+ .198	+ .154
411	57 Sagittarii	6	1	—19 26	19 43 00.707	+3.494	— .061	
412	53 Aquilæ α	1.2	2	+ 8 27	19 43 04.325	+2.925	+ .030	+ .092
413	60 Aquilæ β	4	3	+ 6 01	19 47 33.143	+2.945	+ .155	+ .035
414	12 Sagittæ γ	4.5	2	+19 04	19 51 43.952	+2.660	+ .612	
415	15 Vulpeculæ *g*	5	2	+27 19	19 54 35.799	+2.462	+ .625	
416	16 Sagittæ η	6	1	+19 32	19 58 09.266	+2.656	+ .664	
417	67 Draconis ρ	5	1	+67 25	20 02 06.384	+0.304	+2.406	
418	67 Aquilæ ρ	5	1	+14 43	20 06 57.872	+2.770	+ .112	
419	6 Capricorni α^2	3	2	—13 02	20 09 16.824	+3.332	— .140	— .135
420	1 Cephei κ	4.5	1	+77 14	20 14 06.026	—1.882	+4.350	
421	Ursæ Min. λ	6	2	+88 50	20 19 57.250	—50.968		+ .037
422	76 Draconis	5	1	+81 56	20 53 30.754	—3.725	—9.896	
423	8 Cephei β	3	2	+69 52	21 26 35.782	+0.807	+1.004	— .041
424	35 Cephei γ	3	7	+76 45	23 32 55.314	+2.401	+1.777	+ .078

CATALOGUE

OF

TWELVE HUNDRED AND FORTY-EIGHT STARS

OBSERVED

AT WASHINGTON

BETWEEN

OCTOBER, 1838, AND JULY, 1842,

REDUCED

TO THE MIDDLE EPOCH, JANUARY, 1, 1840,

AND

COMPARED IN RIGHT ASCENSION WITH THE MEAN PLACES

OF

THE BRITISH ASSOCIATION CATALOGUE.

1846.

INTRODUCTION TO THE GENERAL CATALOGUE.

Column 1, of the *left-hand page*, contains the numbers of the general catalogue, continued from 1 to 1248 uninterruptedly. The asterisks prefixed to the numbers refer to notes which follow the catalogue.

Column 2. Names of the constellations in which the stars are located, arranged according to the order of the right ascensions of the stars. The letters, numbers, and nomenclature, adopted by Mr. Baily in the Catalogue of the British Association, have been followed.

Column 3. The adopted magnitude: this is the arithmetical mean of all the estimates of the magnitude of the star, as made at each observation.

Column 4. The mean year of observation, allowing equal weights to each.

Column 5. The total number of observations of that star.

Column 6. The mean right ascension on the 1st January, 1840. This epoch was adopted, as well because of its being near the middle period of the observations, as because of the commencement of a decade. To the concluded mean right ascension of each star, as contained in the preceding annual catalogues, has been applied its precession + the proper motion multiplied by the number of years before or after 1840. To the results thus obtained, weights are allowed proportionate to the number of observations in the respective years, and a mean of the whole taken.

Column 7. The annual precession in right ascension is that computed by Mr. Baily for the British Association Catalogue, diminished (algebraically) by one-tenth of the *secular variation* of the precession, also obtained from that catalogue, by which the precession is reduced to the epoch 1840. Some few of the stars are not contained in either of the volumes in my possession. For these, the precession has been computed by the formula,

Precession in right ascension $= 3^s.068 + \sin.\ \alpha\ \cot an\ \pi \times$ *No.* (*log.* $= 0.1259$);
Precession in polar distance $= \text{cosin}\ \alpha \times$ No. (log. $= 1.3020$);
α and π being the right ascension and polar distance of the star on the 1st January, 1840.

Column 8. Proper motion in right ascension, copied without alteration from the B. A. C.

Column 1, of the *right-hand page*: same as first column of the left-hand side, to facilitate reference.

Column 2. Mean north polar distance, January 1st, 1840. Believing that this volume may reach many amateurs to whom the great catalogue last compiled by Mr. Baily may be inaccessible, and to whom even a portion of its information will be valuable, I deemed that the addition of the polar distances of the stars in the present catalogue, derived from this most authentic source, would be an acceptable acquisition, and have accordingly reduced the polar distances of the B. A. C. to the epoch adopted for the right ascensions. To this end, the precession in north polar distance has been corrected for —5 years by the secular variation of that element, and multiplied by 10 (years.) The quantity thus obtained, increased (algebraically) by the proper motion in 10 years, has been applied with its proper sign to the polar distance for 1850, and the result inserted in column 2.

Column 3. The precession in polar distance, taken from the B. A. C., and corrected for ten years by the secular variation found in the same catalogue.

Column 4. The proper motion in polar distance, from the B. A. C.

Column 5. The difference of the concluded mean right ascension, January 1st, 1840, as observed at Washington, from that of the B. A. C. reduced to the same epoch. To make this comparison, the mean precession in right ascension between column 7 of the left-hand page and that of the B. A. C. was increased (algebraically) by the proper motion in right ascension, and multiplied by 10, the number of years between the two epochs. The quantity thus obtained, applied with its proper sign to the B. A. C. right ascension for 1850, reduces it to 1840, which taken from the concluded right ascension gives the difference in this column.

Column 6. The difference of the right ascension from that of the Nautical Almanac for 1840.

Column 7. The numbers of the stars to which they are annexed, in the Catalogue of the Astronomical Society. Their insertion indicates that the star has been changed, either in the constellation, number, or letter, or that it is one of those having neither number nor letter to designate it.

Column 8. The numbers in the B. A. C., inserted to facilitate finding stars which have neither prefix nor distinguishing letter.

GENERAL CATALOGUE.

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
1	21	Andromedæ	α	1	1840	28	0 00 07.753	+3.071	+0.013
2	88	Pegasi	γ	2.3	1840	20	0 05 00.180	3.078	+0.005
*3	35	Piscium		6	1840	2	0 06 44.494	3.077	+0.007
4	36	Piscium		6.7	1841	5	0 08 21.021	3.077	0.000
5		Piscium		6.7	1841	2	0 09 34.583	3.072	—0.005
6	8	Ceti	ι	4	1839	4	0 11 15.958	3.059	+0.001
7	40	Piscium		6.7	1841	1	0 11 40.596	3.089	0.000
8	41	Piscium	d	5.6	1840	11	0 12 22.082	3.080	+0.005
9	9	Ceti		6	1840.5	4	0 14 39.694	3.051	+0.028
10		Ceti		6.7	1841	1	0 16 19.176	3.066	—0.013
11	44	Piscium		6	1838	3	0 17 12.053	3.073	+0.002
12		Phœnicis	α	2	1840.5	8	0 18 21.619	2.970	+0.015
13	48	Piscium		6	1841	1	0 19 54.437	3.103	+0.004
14	12	Ceti		6	1840.5	6	0 21 52.358	3.060	+0.003
15		Ceti		6	1840.5	2	0 22 22.110	3.011	—0.005
16	52	Piscium		6	1841	1	0 24 12.706	3.121	+0.012
17		Piscium		7	1840	1	0 25 53.675	3.095	+0.009
18		Piscium		6.7	1840	3	0 26 37.887	3.105	+0.003
19	13	Ceti		6	1841	2	0 27 00.845	3.058	+0.027
20	14	Ceti		6	1841	1	0 27 20.056	3.067	+0.009
21	30	Andromedæ	ε	4	1840	2	0 30 06.848	3.165	—0.013
22	31	Andromedæ	δ	3	1839	6	0 80 47.100	3.174	+0.011
23	18	Cassiopeæ	α	3	1841.5	8	0 31 28.011	3.339	+0.010
24	16	Ceti	β	2.3	1840	23	0 35 33.293	2.999	+0.017
25	34	Andromedæ	ζ	5	1841	1	0 38 52.076	3.168	—0.001
26	60	Piscium		6	1841	1	0 39 07.357	3.094	+0.002
27	24	Cassiopeæ	η	4	1842	1	0 39 27.748	3.423	+0.135
28		Piscium		6	1838	1	0 40 00.244	3.089	+0.039
29	63	Piscium	δ	5	1840	12	0 40 23.158	3.098	+0.008
30	19	Ceti	ϕ^2	6	1841	2	0 42 06.702	3.021	—0.013
31	20	Ceti		5	1840.5	6	0 44 49.944	3.062	+0.002
32	36	Andromedæ		6	1841	1	0 46 24.706	3.183	+0.011
33	27	Cassiopeæ	γ	3	1842	1	0 47 06.239	3.540	+0.001
34	67	Piscium	k	6.7	1839	3	0 47 22.490	3.206	+0.007
35	22	Ceti	ϕ^3	6	1841	2	0 47 59.921	3.011	0.000
36	38	Andromedæ	η	5	1840	4	0 48 40.475	3.187	+0.001
37	23	Ceti	ϕ^4	6	1841	2	0 50 43.158	3.007	—0.001
38		Sculptoris	α	5	1840	7	0 50 53.603	2.899	+0.001
39		Piscium		6.7	1840	1	0 51 32.308	3.100	+0.003
40	71	Piscium	ε	4	1839.5	13	0 54 38.639	+3.109	+0.004

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1	61	47	33.7	−20.06	+0.13	+0.053	+0.034		
2	75	42	22.4	20.05	+0.01	+0.010	−0.063		
3	82	04	05.4	20.05	+0.04	−0.075			
4	82	38	53.3	20.04	−0.02	−0.049			
5	89	12	04.5	20.04	+0.01	−0.117		19	57
6	90	42	42.5	20.03	+0.05	−0.622			
7	74	38	17.2	20.03	+0.02	+0.026			
8	82	41	53.9	20.02	−0.05	−0.158			
9	103	05	58.8	20.01	−0.10	+0.064			
10	93	06	12.9	20.00	+0.10	−0.034		26	81
11	88	56	48.2	20.00	0.00	−0.137			
12	133	10	28.6	19.99	+0.30	+0.039			
13	74	26	25.5	19.98	−0.01	−0.073			
14	94	50	33.6	19.96	+0.01	−0.112			
15	114	40	27.8	19.96	+0.06	−0.145		38	115
16	70	35	15.9	19.94	+0.03	−0.064			
17	80	34	40.6	19.93	+0.21	+0.095		47	137
18	77	30	30.8	19.93	−0.03	+0.098		49	142
19	91	28	29.2	19.92	+0.03	+0.035			
20	91	23	07.6	19.92	+0.14	−0.004		51	
21	61	33	26.5	19.89	+0 21	−0.092			
22	60	00	57.9	19.88	+0.11	−0.030			
23	34	20	27.8	19.87	+0.03	−0.004	+0.046		
24	108	51	58.4	19.82	−0.05	+0.113	+0.012		
25	66	36	14.5	19.77	+0.07	−0.006			
26	84	08	00.3	19.77	0.00	−0.013			
27	33	02	06.8	19.76	+0.48	+0.128			
28	85	32	36.3	19.75	+1.18	+0.654		79	221
29	83	17	11.7	19.75	+0.01	−0.042			
30	101	30	25.2	19.72	+0.22	−0.108			
31	92	00	51.2	19.67	−0.01	−0.126			
32	67	14	19.6	19.65	+0.02	−0.004			
33	30	09	04.6	19.63	−0.02	+0.180			
34	63	39	29.3	19.63	−0.08	−0.420			
35	102	08	04.0	19.62	0.00	−0.199			
36	67	26	48.1	19.60	−0.01	−0.135			
37	102	14	41.1	19.57	+0.01	+0.048			
38	120	13	21.6	19.56	+0.03	+0.003			
39	84	22	54.3	19.55	+0.04	−0.062		101	274
40	82	58	22.0	−19.49	−0.02	−0.211			

CATALOGUE OF 1248 STARS

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	*s.*	*s.*
41	27	Ceti		6	1841	2	0 57 35.908	+3.007	0.000
42	75	Piscium		6.7	1841	1	0 58 09.095	3.148	+0.004
43	79	Piscium	ψ^2	6	1842	1	0 59 22.773	3.195	+0.008
44	31	Ceti	η	3.4	1840	3	1 00 32.664	3.002	+0.017
45	1	Ursæ Minoris	α	2.3	1841.5	12	1 02 09.685	16.501	+0.090
46	83	Piscium	τ	6	1840	2	1 02 52.023	3.274	+0.008
47	85	Piscium	φ	6	1839.5	2	1 05 04.221	3.235	+0.001
48	86	Piscium	ζ	6	1842	1	1 05 22.257	3.115	+0.013
49	37	Ceti		6	1841	1	1 06 20.460	3.012	+0.007
50	38	Ceti		6	1840.5	3	1 [illegible] 39.223	3.059	—0.003
*51	39	Ceti		6.7	1840	1	1 08 28.873	3.045	—0.005
52	40	Ceti		6.7	1840	1	1 08 47.648	3.049	+0.017
53	89	Piscium	*f*	6	1841.5	3	1 09 32.826	3.090	—0.001
54	90	Piscium	υ	5.6	1840.5	2	1 10 41.360	3.272	+0.002
55	91	Piscium	*l*	6	1840.5	4	1 12 17.354	3.290	+0.004
56		Ceti		7	1841	2	1 14 22.900	3.078	—0.009
57	45	Ceti	θ	3	1840	10	1 16 01.688	3.002	—0.002
*58	47	Ceti		6.7	1840	2	1 18 57.797	2.959	+0.003
59		Piscium		7	1841	1	1 19 48.406	3.204	+0.008
60		Piscium		7	1841.5	3	1 19 59.819	3.128	0.000
61	98	Piscium	μ	5	1838	1	1 21 48.650	3.114	+0.022
62	99	Piscium	η	4	1840	13	1 22 55.730	3.193	+0.006
63	49	Ceti		6	1839.5	5	1 26 48.999	2.924	+0.009
*64	101	Piscium		6	1840.2	4	1 27 13.718	3.193	+0.002
65		Piscium		6	1841	1	1 27 15.870	3.219	+0.011
66	102	Piscium	π	6	1839	1	1 28 37.241	3.172	—0.002
67	105	Piscium		6	1840.5	6	1 31 03.432	3.215	+0.006
68	107	Piscium		6	1842	1	1 33 49.465	3.259	—0.018
69	109	Piscium		6.7	1840.5	3	1 36 12.185	3.261	—0.003
70	52	Ceti	τ	3.4	1840	4	1 36 38.177	2.905	—0.117
71	110	Piscium	ο	5	1840	4	1 36 56.930	3.151	+0.010
*72	1	Arietis		6	1841	3	1 41 18.891	3.295	+0.009
*73		Ceti		7	1840	2	1 41 31.901	2.954	.....
74	53	Ceti	χ	5	1840	6	1 41 43.729	2.954	—0.008
75	2	Trianguli	α	3.4	1839	1	1 43 58.498	3.393	+0.004
*76	5	Arietis	γ^1	5	1839.7	3	1 44 45.663	3.268	+0.007
77	6	Arietis	β	3	1840.5	12	1 45 48.876	3.287	+0.008
78	8	Arietis	ι	6	1841	2	1 48 37.227	3.258	+0.007
79	48	Cassiopeæ		5	1841	1	1 48 54.854	4.763	—0.001
80	9	Arietis	λ	5.6	1840.5	2	1 49 01.469	+3.328	—0.005

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
41	100	50	12.3	−19.42	+0.01	−0.152			
42	77	54	08.5	19.41	−0.08	−0.025			
43	70	06	50.2	19.38	+0.10	−0.117			
44	101	01	54.9	19.36	+0.12	+0.184			
45	1	32	38.1	19.32	−0.02	−1.045	−0.998		
46	60	45	43.3	19.30	+0.03	+0.003			
47	66	15	52.8	19.25	−0.03	−0.119			
48	83	16	20.8	19.24	+0.06	−0.513			
49	98	47	01.1	19.22	−0.33	−0.060			
50	91	49	55.3	19.21	−0.21	+0.043			
51	93	20	35.4	19.16	+0.01	−0.237			
52	93	07	07.8	19.16	+0.09	−0.032			
53	87	13	47.3	19.14	+0.01	−0.244			
54	63	34	41.4	19.10	−0.05	+0.320			
55	62	05	58.2	19.06	+0.05	−0.066			
56	89	06	38.5	19.00	+0.11	+0.060		144	405
57	99	00	37.7	18.96	+0.20	−0.012	+0.035		
58	103	53	24.1	18.87	−0.01	−0.053			
59	73	45	00.2	18.86	+0.02	−0.054		157	439
60	92	52	10.1	18.85	−0.03	−0.071		158	440
61	84	41	01.2	18.80	+0.18	+0.210			
62	75	28	52.8	18.76	−0.02	−0.230			
63	106	29	53.7	18.64	−0.02	−0.041			
64	76	09	31.2	18.62	−0.02	+0.058			
65	73	23	12.8	18.62	−0.07	−0.135		173	477
66	78	40	42.3	18.58	−0.08	−0.264			
67	74	24	30.1	18.49	0.00	−0.048			
68	70	30	43.0	18.40	+0.66	+0.055			
69	70	43	06.5	18.32	+0.08	+0.125			
70	106	46	37.8	18.30	−0.87	−0.033			
71	81	38	59.6	18.29	−0.04	−0.175			
72	68	31	14.6	18.13	−0.09	+0.031		193	556
73	101	31		18.12	....	.....			
74	101	28	49.2	18.11	+0.09	+0.041			
75	61	12	12.0	18.03	+0.21	−0.102			
76	71	29	36.8	17.99	+0.09	−0.017			
77	69	58	38.0	17.95	+0.11	+0.016			
78	72	57	57.1	17.84	−0.01	−0.098			
79	19	52	26.7	17.83	+0.01	−1.076			
80	67	11	13.4	−17.83	0.00	−0.111			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
81	56	Ceti		6	1840	1	1 49 10.534	+2.806	+0.005
82	50	Cassiopeæ		4.5	1841	1	1 49 53.731	4.930	—0.008
83	59	Ceti	υ	4.5	1839.8	7	1 52 27.873	2.818	+0.009
*84	113	Piscium	α	5	1840.5	5	1 53 46.378	3.092	+0.009
85	60	Ceti		6	1840	1	1 54 59.506	3.063	+0.008
86	13	Arietis	α	3	1840	16	1 58 10.036	3.346	+0.016
87	15	Arietis		6	1841	6	2 01 46.193	3.300	+0.008
88	64	Ceti		6.7	1841	1	2 02 54.714	3.164	—0.009
89	6	Trianguli		5.6	1839.5	7	2 03 06.352	3.459	—0.002
90	65	Ceti	ξ^1	5	1841	7	2 04 31.624	3.169	—0.001
91	67	Ceti		6	1841	1	2 09 00.358	2.981	+0.007
92	22	Arietis	θ	6	1840	12	2 09 14.246	3.319	+0.004
*93	68	Ceti	ο	6.7	1840	2	2 11 16.085	3.024	—0.003
94	69	Ceti		6	1840.5	5	2 13 44.951	3.066	+0.003
95	70	Ceti		6	1841	2	2 14 03.636	3.049	0.000
*96		Fornacis	κ	6	1839.5	2	2 15 13.460	2.721	+0.025
97	71	Ceti		6	1841	1	2 16 53 841	3.025	+0.005
98	72	Ceti	ρ	5.6	1840.5	5	2 18 13.408	2.895	+0.002
99	12	Trianguli		6	1839.5	2	2 18 48 205	3.492	+0.001
100	26	Arietis		6.7	1841	1	2 21 40.732	3.339	+0.006
101	27	Arietis		6.7	1839.7	7	2 22 02.624	3.302	+0.005
102	76	Ceti	σ	5	1841	1	2 24 30.560	2.845	—0.001
103		Ceti		6.7	1841	3	2 26 36.240	3.165	+0.002
104	77	Ceti		6	1840	2	2 26 49.088	2.951	+0.007
105	78	Ceti	ν	5	1839.5	4	2 27 28.993	3.139	—0.005
106	81	Ceti		6	1841	1	2 29 38.412	3.013	+0.006
107	32	Arietis	ν	5.6	1839.7	9	2 29 44.827	3.387	+0.003
108	82	Ceti	δ	4	1839	2	2 31 17.187	3.065	+0.008
109	83	Ceti	ε	4.5	1840	1	2 31 49.583	2.886	+0.011
110	84	Ceti		6	1841	1	2 33 02.482	3.050	+0.005
111	34	Arietis	μ	6	1840	1	2 33 21.760	3.361	+0.005
112	86	Ceti	γ	3	1840	16	2 35 00.975	3.108	—0.007
113	39	Arietis		4	1840	3	2 38 23.970	3.535	+0.012
*114	15	Persei	η	4.5	1841	1	2 39 04.024	4.302	+0.003
115	40	Arietis		6	1840	1	2 39 34.670	3.343	+0.005
116	42	Arietis	π	5	1840	5	2 40 22.566	3.331	+0.003
117	41	Arietis		3	1840	3	2 40 35.057	3.502	+0.006
*118		Fornacis	υ	7.8	1840	1	2 42 14.795	2.389	—0.006
119	2	Eridani	τ^2	4.5	1839.5	7	2 43 47.009	2.723	—0.003
120		Arietis		7	1840.5	2	2 44 17.766	3.320	+0.008

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
81	113	18	35.6	—17.82	+0.01	—0.046			
82	18	21	27.5	17.79	—0.02	—0.669			
83	111	51	19.8	17.69	—0.02	—0.067			
84	88	00	41.1	17.63	—0.01	—0.107			
85	90	38	47.8	17.58	+0.02	—0.149			
86	67	17	49.6	17.44	+0.12	+0.086	+0.094		
87	71	15	26.1	17.29	0.00	+0.123			
88	82	10	56.1	17.24	+0.10	—0.101			
89	60	27	01.2	17.24	+0.05	+0.042			
90	81	54	25.3	17.16	+0.02	—0.041			
91	97	09	45.1	16.96	+0.12	—0.022			
92	70	50	31.4	16.95	—0.08	—0.094			
93	93	42	27.9	16.85	+0.28	—0.235			
94	90	20	21.9	16.73	+0.07	—0.114			
95	91	36	57.5	16.72	+0.03	+0.021			
96	114	32	47.7	16.66	+0.08	+0.150		246	737
97	93	30	24.4	16.58	—0.06	—0.189			
98	103	00	54.5	16.51	+0.02	—0.042			
99	61	02	55.8	16.49	+0.08	—0.025			
100	70	51	31.2	16.35	+0.01	—0.038			
101	73	00	24.0	16.33	+0.04	+0.069			
102	105	57	00.6	16.19	+0.07	+0.070			
103	83	13	41.7	16.09	+0.12	—0.005		285	789
104	98	33	37.2	16.08	+0.02	—0.132			
105	85	08	32.3	16.05	+0.03	—0.037			
106	94	05	29.7	15.93	—0.01	+0.022			
107	68	44	05.5	15.92	+0.03	+0.177			
108	90	21	56.5	15.84	+0.08	—0.208			
109	102	33	16.8	15.82	+0.23	—0.117			
110	91	22	47.4	15.75	+0.12	+0.017			
111	70	40	25.6	15.73	+0.01	+0.310			
112	87	26	31.1	15.64	+0.16	—0.080	—0.029		
113	61	25	18.1	15.45	+0.11	+0.220			
114	34	46	27.2	15.42	0.00	—0.041		299	863
115	72	23	06.9	15.39	—0.07	+0.120			
116	73	12	18.4	15.34	—0.04	+0.121			
117	63	24	10.2	15.33	+0.10	+0.257			
118	128	04	20.7	15.23	—0.09	+0.135			
119	111	40	00.2	15.15	+0.01	+0.059			
120	74	10	24.2	—15.12	+0.07	+0.071		312	892

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	m.	s.	s.	s.
121	45	Arietis	ρ^2	6	1839.5	5	2	46	49.767	+3.355	+0.002
122	46	Arietis	ρ^3	6	1840.5	2	2	47	25.043	3.350	+0.023
123	48	Arietis	ε	5	1840	22	2	50	04.583	3.412	+0.004
124	92	Ceti	α	2.3	1840	19	2	53	55.336	3.126	+0.002
*125	11	Eridani	τ^3	4	1839	1	2	55	20.510	2.653	—0.010
126	10	Eridani	ρ^3	6	1841	1	2	56	25.284	2.936	+0.007
*127	53	Arietis		6.7	1840.5	9	2	58	25.861	3.363	—0.002
128	54	Arietis		6.7	1841	1	2	59	17.612	3.381	+0.003
129	57	Arietis	δ	4	1840	22	3	02	29.495	3.401	+0.015
130	12	Eridani	α	4	1839	3	3	05	16.861	2.521	+0.029
131	58	Arietis	ζ	5	1839.7	6	3	05	42.984	3.481	+0.001
132	13	Eridani	ζ	4	1840	3	3	08	04.119	2.909	+0.001
133	95	Ceti		5.6	1839.5	7	3	10	11.455	3.044	+0.020
134	59	Arietis		6.7	1841	1	3	10	23.313	3.563	+0.001
135	15	Eridani		5.6	1840	1	3	11	18.113	2.648	+0.003
136	16	Eridani	τ^4	3.4	1839.7	3	3	12	24.146	2.662	+0.003
137	64	Arietis		5.6	1839.5	12	3	14	52.413	3.521	+0.002
138	1	Tauri	o	4.5	1840.5	2	3	16	12.736	3.221	0.000
139	2	Tauri	ξ	4	1841	5	3	18	30.263	3.235	+0.007
140	4	Tauri	s	5.6	1840.5	3	3	21	40.284	3.267	+0.004
141	5	Tauri	f	5.6	1840.5	3	3	22	03.022	3.297	+0.006
142	17	Eridani		4.5	1840.5	5	3	22	40.956	2.969	+0.004
143	7	Tauri		6	1840	1	3	24	58.792	3.533	+0.003
144	18	Eridani	ϵ	4	1840	5	3	25	23.627	2.887	—0.061
145	19	Eridani	τ^5	4	1840	6	3	26	43.270	2.643	0.000
146	10	Tauri		5	1839.5	2	3	28	42.595	3.068	—0.011
147	20	Eridani		6	1840.5	2	3	29	00.287	2.727	+0.001
148	21	Eridani		6	1840.5	5	3	31	07.350	2.956	—0.004
149	11	Tauri		6	1842	1	3	31	13.613	3.563	+0.003
150		Eridani		5	1839	1	3	31	21.584	2.151	—0.004
151	12	Tauri		6	1840.5	2	3	31	31.449	3.118	—0.002
*152		Eridani		6	1841.5	2	3	32	08.390	2.491	—0.004
153	16	Tauri		5.6	1841	6	3	35	18.354	3.546	+0.006
154	17	Tauri		4.5	1840	20	3	35	23.184	3.542	+0.004
155	23	Eridani	δ	3.4	1839	1	3	35	35.271	2.875	—0.004
156	25	Tauri	η	3	1840	26	3	37	59.068	3.516	+0.004
157	27	Tauri		5	1840	9	3	39	39.530	3.547	+0.003
158	28	Tauri		5.6	1840	1	3	39	40.415	3.549	+0.004
159	28	Eridani	τ^7	5	1842	1	3	40	47.096	2.573	+0.004
*160		Eridani		5	1841	7	3	42	41.835	+2.205	+0.015

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
121	72	19	14.3	—14.97	—0.01	+0.087			
122	72	37	08.1	14.94	+0.17	+0.293			
123	69	16	14.2	14.78	0.00	+0.123			
124	86	32	30.5	14.55	+0.10	+0.041	—0.009		
125	114	15	19.8	14.47	+0.08	+0.120			954
126	98	13	50.4	14.40	0.00	+0.084			
127	72	44	31.4	14.27	0.00	+0.136			
128	71	49	25.8	14.22	+0.02	+0.002			
129	70	53	00.2	14.03	—0.01	+0.075			
130	119	37	17.7	13.85	—0.64	+0.051			
131	60	33	11.3	13.83	+0.06	—0.006			
132	99	25	06.6	13.67	—0.02	+0.199			
133	91	31	02.8	13.53	+0.09	—0.225			
134	63	30	40.6	13.53	+0.02	+0.033			
135	113	06	00.9	13.47	0.00	+0.293			
136	112	20	38.2	13.39	—0.05	+0.026			
137	65	50	53.1	13.23	+0.06	+0.103			
138	81	32	18.7	13.15	+0.06	+0.126			
139	80	49	47.0	13.00	+0.04	—0.097			
140	79	13	03.8	12.78	+0.04	+0.014			
141	77	36	58.5	12.76	0.00	+0.112			
142	95	37	43.3	12.71	+0.03	—0.084			
143	66	04	37.8	12.55	+0.03	+0.112			
144	100	00	16.1	12.52	+0.06	—0.363			
145	112	10	24.3	12.44	+0.03	—0.090			
146	90	06	38.5	12.30	+0.52	—0.255			
147	109	00	04.2	12.28	+0.01	+0.217			
148	96	08	26.9	12.13	+0.21	+0.020			
149	65	11	39.8	12.12	+0.05	—0.007			
150	130	48	11.1	12.11	+0.01	+0.284		394	1125
151	87	28	04.9	12.11	—0.01	—0.051			
152	118	28	07.5	12.06	—0.08	—0.030		396	1130
153	66	13	08.8	11.84	+0.05	+0.114			
154	66	23	42.0	11.83	+0.03	+0.094			
155	100	18	34.9	11.81	—0.73	—0.069			
156	66	23	41.6	11.65	+0.05	+0.008	—0.064		
157	66	26	27.8	11.53	+0.05	+0.010			
158	66	21	25.9	11.52	+0.04	—0.345			
159	114	22	29.4	11.45	—0.03	+0.216			
160	128	06	46.0	—11.31	—0.12	+0.135		426	1199

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
161		Eridani	υ^2	5	1840	1	3 43 27.899	+2.246	—0.013
162	31	Tauri	u^2	6	1840.5	4	3 43 28.713	3.188	0.000
163	44	Persei	ζ	3.4	1839.7	5	3 44 05.110	3.748	+0.005
•164	32	Eridani		5	1841	5	3 46 15.634	3.004	+0.007
165	33	Eridani	τ^6	5.6	1841.5	5	3 46 54.402	2.547	+0.009
166	32	Tauri		6	1840	1	3 47 25.556	3.524	+0.006
167		Eridani	υ^3	5.6	1840	3	3 47 33.420	2.280	—0.003
•168	34	Eridani	γ	2.3	1840	16	3 50 33.927	2.790	+0.006
169		Tauri		6.7	1840	1	3 51 36.130	3.433	+0.007
170	35	Tauri	λ	4	1640	1	3 51 49.582	3.312	+0.002
171	38	Tauri	ν	5	1840	1	3 54 39.007	3.181	+0.003
172	37	Tauri	A^1	5	1840	17	3 55 14.719	3.525	+0.008
•173	39	Tauri	A^2	7	1839.5	3	3 55 52.573	3.524	+0.016
174	41	Tauri		6	1840	1	3 56 48.453	3.660	+0.006
175	42	Tauri	ψ	5.6	1840.5	2	3 57 07.965	3.696	+0.001
176		Tauri		6.7	1840	1	3 58 50.451	3.422	+0.005
177		Eridani		6	1841	3	3 59 01.980	2.454	+0.015
178	43	Tauri	ω^1	6.7	1839.5	5	3 59 51.215	3.473	+0.010
179	44	Tauri	p	5.6	1841	2	4 01 06.238	3.638	+0.003
180	37	Eridani		5.6	1840.5	2	4 02 34.423	2 921	+0.003
181	45	Tauri		6	1841	1	4 02 49.702	3.174	+0.012
182		Tauri		7	1841	2	4 03 22.678	3.543	+0.002
183	38	Eridani	o^1	4.5	1839.5	5	4 04 03.383	2.922	0.000
184	47	Tauri		5.6	1840	1	4 05 14.526	3.253	+0.003
185	48	Tauri		6.7	1841	1	4 06 41.595	3.386	+0.010
186	39	Eridani	A	5	1841.5	2	4 06 47.250	2.849	+0.002
187	49	Tauri	μ	5.6	1840	5	4 06 51.014	3.246	+0.003
188	50	Tauri	ω^2	5.6	1840	1	4 07 53.801	3.505	+0.001
189	40	Eridani	o^2	5	1840	1	4 07 54.705	2.907	—0.144
190		Horologii	α	5	1840	1	4 08 42.567	1.980	+0.012
191	52	Tauri	ϕ	6	1842	1	4 10 31.695	3.675	—0.003
192	54	Tauri	γ	3.4	1840	7	4 10 41.616	3.394	+0.012
193	57	Tauri	h	6	1841	1	4 10 57.508	3.359	+0.011
194	41	Eridani	υ^4	3.4	1839.5	4	4 11 50.718	2.262	+0.002
•195	59	Tauri	χ	6	1840.5	3	4 12 51.322	3.634	+0.005
196	63	Tauri		6	1842	1	4 14 14.715	3.423	+0.010
197	62	Tauri		7	1810	1	4 14 21.526	3.602	+0.004
198	64	Tauri	δ^2	4.5	1840	2	4 14 52.584	3.439	+0.011
199		Eridani		6	1841	1	4 14 53.193	2.483	+0.001
200	69	Tauri	υ^1	5	1840.5	13	4 16 44.482	+3.568	+0.010

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
161	126	41	18.2	—11.26	+0.08	—0.071		428	1201
162	83	57	00.2	11.25	—0.02	+0.063			
163	58	35	49.2	11.21	+0.02	—0.190			
164	93	25	57.1	11.05	0.00	—0.076			
165	115	05	29.3	11.00	+0.09	—0.278			
166	67	59	16.0	10.96	+0.14	+0.086			
167	125	12	33.4	10.96	+0.05	+0.300		437	1220
168	103	58	04.8	10.73	+0.10	—0.033	—0.085		
169	72	15	45.0	10.66	+0.03	+0.090		441	1240
170	77	58	00.1	10.64	—0.01	+0.132			
171	84	27	35.0	10.43	+0.01	—0.053			
172	68	21	39.2	10.38	+0.06	—0.001			
173	68	25	40.4	10.33	+0.10	+0.133			
174	62	50	11.4	10.27	+0.02	+0.213			
175	61	26	13.9	10.25	—0.02	+0.165			
176	73	05	35.7	10.11	+0.01	+0.381		454	1272
177	118	05	36.2	10.10	—0.14	+0.140		456	1273
178	70	49	10.3	10.04	+0.06	+0.025			
179	63	56	31.5	9.95	0.00	+0.238			
180	97	20	48.4	9.84	+0.03	—0.097			
181	84	54	01.0	9.81	+0.05	+0.182			
182	68	00	10.4	9.78	—0.05	+0.153		463	1289
183	97	15	35.6	9.72	—0.06	—0.217			
184	81	08	50.8	9.63	+0.08	—0.244			
185	75	06	22.5	9.51	+0.05	+0.005			
186	100	39	30.9	9.51	+0.18	+0.030			
187	81	30	48.8	9.50	+0.02	+0.004			
188	69	49	17.7	9.48	+0.06	+0.151			
189	97	54	23.1	9.43	+3.45	+0.175			
190	132	41	29.2	9.37	+0.15	+0.257			
191	63	02	15.8	9.22	+0.04	+0.265			
192	74	45	52.4	9.20	+0.02	—0.064			
193	76	21	22.8	9.18	+0.01	—0.002			
194	124	11	34.5	9.12	+0.02	+0.068			
195	64	45	16.8	9.04	+0.04	+0.052			
196	73	36	04.6	8.92	—0.01	+0.095			
197	66	04	39.2	8.92	+0.01	+0.126			
198	72	55	55.3	8.87	0.00	—0.116			
199	116	06	35.0	8.88	+0.14	+0.263		493	1355
200	67	33	18.1	—8.74	+0.03	+0.052			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	m.	s.	s.	s.
201	71	Tauri		5.6	1841	1	4	17	14.280	+3.399	+0.010
202	43	Eridani	υ^5	4.5	1841.5	2	4	18	01.845	2.245	+0.009
203	74	Tauri	ε	4	1839.5	2	4	19	16.691	3.483	+0.010
204	44	Eridani		5.6	1840.5	4	4	20	16.187	3.092	+0.006
205	80	Tauri		6	1840.5	2	4	21	01.511	3.402	+0.008
206	85	Tauri		6.7	1840	1	4	22	43.770	3.408	+0.007
207	45	Eridani		5.6	1840.5	4	4	23	41.844	3.063	0.000
208	87	Tauri	α	1	1840.5	22	4	26	44.723	3.427	+0.008
209	51	Eridani	c	6	1841.5	2	4	29	33.088	3.011	+0.009
210	92	Tauri	σ^2	5.6	1841.5	2	4	30	07.703	3.415	+0.010
211	53	Eridani		4.5	1840.5	2	4	30	50.929	2.748	—0.002
212	94	Tauri	τ	5	1840.5	14	4	32	38.940	3.588	+0.003
213	54	Eridani		4	1841.5	2	4	33	26.653	2.619	+0.004
214		Eridani		6	1841	1	4	33	27.982	2.497	—0.002
215		Tauri		6	1840	1	4	35	34.146	3.309	+0.013
216		Cæli	θ	5	1841	6	4	36	24.361	2.114	+0.008
217	57	Eridani	μ	5	1839.5	4	4	37	30.263	2.993	+0.008
218	9	Camelopardi	α	4.5	1841.5	5	4	38	12.122	5.892	+0.007
219	58	Eridani		6	1840.5	4	4	40	25.504	2.681	+0.014
220	96	Tauri		6	1841	3	4	40	35.359	3.422	+0.003
221	1	Orionis	π^1	4	1840	3	4	41	09.343	3.218	+0.039
*222	3	Orionis	π^3	4.5	1840	5	4	42	41.296	3.188	+0.005
223	60	Eridani		6	1841.5	2	4	42	59.110	2.697	+0.006
224	4	Orionis	o^1	5	1840	1	4	43	29.284	3.385	+0.002
225	7	Camelopardi		5	1841.5	4	4	44	29.169	4.780	+0.002
226	5	Orionis		6	1840	1	4	45	02.257	3.121	+0.004
227	61	Eridani	ω	5	1840.5	4	4	45	02.273	2.944	+0.002
228	8	Orionis	π^5	4.5	1839	2	4	45	54.902	3.119	+0.003
229	9	Orionis	o^2	5	1840.5	5	4	47	22.856	3 370	—0.001
230	99	Tauri		6.7	1840	1	4	48	06.646	3.629	+0.004
231	62	Eridani	b	6	1841	4	4	48	31.583	2.950	+0.004
232	10	Camelopardi	∂	4.5	1841	1	4	49	13.271	5.295	+0.004
233	10	Orionis	π^6	5.6	1840.5	4	4	50	15.663	3.104	+0.007
234	63	Eridani		5	1840.3	3	4	52	16.240	2 834	+0.006
235	102	Tauri	ι	4.5	1840	16	4	53	32.258	3.571	+0.009
236	65	Eridani	ψ	5	1841	1	4	53	41.198	2.904	+0.002
237	1	Leporis		6	1842	1	4	55	59.808	2.524	+0.009
238	104	Tauri	m	5	1841	6	4	57	59.915	3.500	+0.045
239	106	Tauri	l	6	1841	1	4	58	20.863	3.545	+0.001
240	2	Leporis	ε	4	1839	5	4	58	41.325	+2.584	+0.004

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
201	74	46	06.0	—8.69	+0.04	+0.040			
202	124	23	33.2	8.65	+0.01	+0.035			
203	71	10	49.9	8.53	+0.02	—0.119			
204	88	58	43.9	8.45	—0.01	—0.013			
205	74	43	06.3	8.39	+0.03	—0.029			
206	74	29	54.6	8.25	+0.06	+0.020			
207	90	23	37.7	8.18	+0.07	+0.124			
208	73	49	04.6	7.92	+0.15	—0.027	—0.048		
209	92	47	53.2	7.71	+0.04	—0.112			
210	74	24	19.6	7.65	+0.01	—0.077			
211	104	37	17.3	7.61	+0.16	—0.481			
212	67	21	21.9	7.44	0.00	+0.020			
213	109	59	01.0	7.40	+0.11	—0.127			
214	114	48	01.0	7.39	+0.11	+0.342		546	1450
215	79	09	27.7	7.22	0.00	+0.076		547	1460
216	127	27	38.7	7.16	—0.19	+0.031			
217	93	33	10.8	7.06	—0.01	—0.157			
218	23	56	23.7	7.01	—0.02	+0.622		552	1474
219	107	13	55.7	6.83	—0.19	+0.124			
220	74	22	54.2	6.81	+0.08	+0.189			
221	83	19	26.0	6.76	+0.01	—0.227			
222	84	40	28.6	6.63	+0.03	—0.064			
223	106	30	00.3	6.62	—0.08	—0.010			
224	76	01	18.4	6.58	+0.06	+0.104			
225	36	30	45.9	6.48	0.00	+0.399			
226	87	45	41.2	6.44	+0.03	—0.073			
227	95	43	33.0	6.44	—0.01	+0.043			
228	87	49	35.9	6.37	0.00	—0.388			
229	76	44	39.0	6.25	+0.04	—0.004			
230	66	18	27.1	6.19	+0.03	+0.056		572	
231	95	25	51.7	6.15	+0.08	—0.047			
232	29	48	06.5	6.09	+0.02	+0.561			
233	88	32	12.1	6.01	—0.01	—0.007			
234	100	30	09.7	5.84	+0.12	—0.030			
235	68	38	41.7	5.74	+0.04	—0.032			
236	97	24	49.9	5.72	—0.01	+0.168			
237	113	01	40.7	5.54	—0.06	—0.132			
238	71	34	34.2	5.36	—0.03	—0.095			
239	69	47	58.6	5.33	+0.05	+0.323			
240	112	35	25.0	—5.31	+0.05	—0.115			

CATALOGUE OF 1248 STARS

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	*m.*	*s.*	*s.*	*s.*
241	14	Orionis	*i*	6	1842	1	4	59	10.594	+3.259	+0.007
242	67	Eridani	*θ*	3	1840	3	4	59	59.220	2.951	—0.003
*243	69	Eridani	*λ*	4.5	1839.5	6	5	01	29.519	2.867	+0.005
244	3	Leporis	*ι*	5	1839	1	5	04	49.998	2.793	+0.005
245		Orionis		5	1840	1	5	05	51.668	2.880	+0.004
246	19	Orionis	*β*	1	1840	32	5	06	51.011	2.879	+0.005
247	109	Tauri	*n*	5.6	1841	1	5	09	40.236	3.595	+0.006
248	20	Orionis	*τ*	4	1841.5	3	5	09	50.428	2.910	+0.005
249		Columbæ		7	1840	1	5	10	02.499	2.153	+0.004
250		Leporis		6	1842	1	5	10	19.406	2.753	.....
251	21	Orionis		6	1840.5	3	5	10	50.604	3.126	+0.001
252		Aurigæ		6	1841	1	5	11	02.523	3.807	+0.002
253		Columbæ	*o*	5	1840	8	5	11	43.059	2.153	+0.009
*254	6	Leporis	*λ*	4.5	1840.7	5	5	12	12.306	2.760	+0.004
255	22	Aurigæ		7	1841	1	5	13	15.094	3.790	+0.004
256	22	Orionis	*o*	5.6	1840	2	5	13	35.740	3.058	+0.006
257	112	Tauri	*β*	2	1840	41	5	16	11.009	3.782	+0.008
258		Leporis		6	1841.5	3	5	19	37.658	2.790	+0.035
*259	9	Leporis	*β*	4	1840	17	5	21	23.459	2.568	+0.004
260	31	Orionis		5	1840	2	5	21	36.509	3.043	+0.003
261	34	Orionis	*δ*	2	1840.5	24	5	23	50.066	3.061	+0.005
262	11	Leporis	*α*	3.4	1840	15	5	25	40.507	2.643	+0.005
263	46	Orionis	*ε*	2.3	1840.2	18	5	28	05.823	3.041	+0.003
*264	26	Aurigæ		6	1839.5	10	5	28	21.940	3.847	—0.002
265	125	Tauri		6	1841.5	4	5	29	49.561	3.712	+0.006
266	48	Orionis	*σ*	4.5	1839	1	5	30	42.809	3.008	+0.002
267		Columbæ	*α*	2	1840	34	5	33	51.582	2.169	+0.008
268	129	Tauri		6.7	1842	2	5	37	33.658	3.446	+0.005
269	13	Leporis	*γ*	4	1840	6	5	37	47.692	2.519	—0.019
270	131	Tauri		6	1840.5	2	5	38	06.552	3.413	+0.004
271	130	Tauri		6.7	1840.5	2	5	38	06.557	3.495	+0.001
272	132	Tauri		5	1840	2	5	39	12.000	3.678	+0.005
273		Columbæ	*μ*	6	1840	5	5	40	03.312	2.226	+0.005
274	53	Orionis	*κ*	3	1841.5	4	5	40	10.140	2.842	+0.004
275	136	Tauri		5	1840	27	5	43	16.481	3.767	+0.004
276	58	Orionis	*α*	1	1840	34	5	46	30.699	3.243	+0.006
277	139	Tauri		5.6	1840.5	3	5	48	04.122	3.720	+0.005
278	16	Leporis	*η*	4	1838.5	2	5	49	06.920	2.733	+0.002
*279	59	Orionis		6	1841	4	5	50	05.981	3.113	+0.003
280	60	Orionis		6	1840.5	4	5	50	36.114	+3.083	+0.005

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						A. S. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
241	81	42	57.7	−5.26	+0.06	+0.144			
242	95	17	55.6	5.19	+0.08	−0.030			
243	98	57	51.9	5.06	−0.02	−0.021			
244	102	04	00.1	4.78	+0.02	−0.192			
245	98	20	29.5	4.69	+0.04	−0.242		617	1618
246	98	23	30.8	4.61	−0.02	+0.050	−0.081		
247	68	04	31.5	4.37	−0.05	+0.146			
248	97	01	22.1	4.35	+0.03	+0.008			
249	125	06	38.7	4.35	+0.08	−0.121			1641
250	103	41	39.5	4.35	−0.02	+0.056		626	1643
251	87	34	31.2	4.26	+0.05	+0.044			
252	60	36	01.7	4.25	+0.12	+0.203		629	1649
253	125	03	27.4	4.19	+0.50	+0.129			
254	108	20	43.3	4.15	+0.02	−0.084			
255	61	13	22.4	4.06	+0.02	+0.034			
256	90	32	47.3	4.03	+0.02	−0.190			
257	61	32	03.4	3.81	+0.19	+0.129	+0.052		
258	102	02	27.1	3.51	+0.06	−0.172		658	1708
259	110	53	29.0	3.37	+0.08	−0.051			
260	91	13	26.6	3.34	+0.04	−0.121			
261	90	25	23.3	3.15	+0.04	+0.056	−0.038		
262	107	56	30.7	2.99	−0.01	+0.007	−0.055		
263	91	18	34.0	2.78	+0.01	+0.043	−0.037		
264	59	36	36.4	2.76	+0.01	+0.250			
265	64	11	57.9	2.63	+0.01	+0.121			
266	92	41	53.4	2.55	+0.01	−0.171			
267	124	09	50.6	2.28	0.00	+0.142	+0.064		
268	74	14	46.0	1.96	−0.02	+0.058			
269	112	30	16.4	1.94	−0.35	−0.018			
270	75	34	40.3	1.91	+0.09	+0.112			
271	72	20	14.8	1.91	0.00	+0.007			
272	65	29	35.0	1.81	+0.01	+0.030			
273	122	22	16.6	1.74	+0.04	+0.052			
274	99	43	55.4	1.73	+0.03	−0.040			
275	62	25	57.8	1.46	+0.06	+0.101			
276	82	37	44.7	1.18	0.00	+0.029	−0.011		
277	64	04	22.3	1.04	0.00	+0.022			
278	104	12	07.0	0.95	−0.15	−0.290			
279	88	11	06.9	0.86	+0.04	+0.091			
280	89	28	05.8	−0.82	+0.04	−0.016			

No.	Constellation.	Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
					h. m. s.	s.	s.
281	Columbæ γ	4	1839.5	7	5 51 51.986	+2.124	+0.003
282	64 Orionis χ^3	5.6	1841	1	5 53 59.183	3.549	+0.010
283	3 Monocerotis	5.6	1840.5	4	5 54 18.933	2.820	—0.001
284	1 Geminorum	5	1841.5	2	5 54 23.745	3.645	+0.003
285	62 Orionis χ^4	5	1841	3	5 54 25.147	3.561	+0.004
286	66 Orionis	6	1839.5	3	5 56 31.160	3.168	+0.001
287	17 Leporis	5.6	1841.5	2	5 57 50.803	2.675	+0.007
288	67 Orionis ν	5	1840	8	5 58 26.237	3.423	+0.005
289	18 Leporis θ	5	1841.5	2	5 58 54.887	2.714	+0.004
*290	Geminorum	6.7	1840	1	5 59 53.566	3.617	—0.007
291	19 Leporis	6	1839.5	2	6 00 44.083	2.606	+0.003
292	Camelopardi	5	1841	3	6 01 12.480	6.620	+0.003
293	5 Geminorum	7	1842	1	6 01 43.686	3.678	+0.004
294	Columbæ θ	5	1840	4	6 02 02.736	2.055	+0.014
295	68 Orionis	6	1841	1	6 02 32.716	3.552	+0.006
296	1 Lyncis	5	1841.5	3	6 03 09.473	5.538	0.000
*297	44 Aurigæ κ	4	1839.5	15	6 05 11.065	3.828	0.000
298	7 Geminorum η	4.5	1841.5	2	6 05 13.065	3.626	—0.002
299	2 Lyncis	4.5	1842	1	6 05 30.557	5.300	+0.010
300	72 Orionis f^2	6	1840.5	3	6 06 11.764	3.459	+0.007
301	5 Monocerotis	4.5	1841	2	6 07 03.212	2.925	+0.003
302	75 Orionis l	6	1840.5	5	6 08 17.371	3.306	+0.008
*303	10 Geminorum	7	1840	1	6 09 09.510	3.656	+0.002
304	11 Geminorum	7.8	1840.5	2	6 09 34.918	3.652	+0.004
305	Columbæ κ	4.5	1839	1	6 10 52.356	2.132	+0.001
306	13 Geminorum μ	3	1840	22	6 13 16.885	3.626	+0.010
307	3 Canis Majoris	4	1840.3	4	6 16 16.004	2.193	+0.004
308	15 Geminorum	6.7	1841	2	6 18 14.371	3.579	0.000
369	48 Aurigæ	6	1840.5	4	6 18 17.036	3.858	+0.002
310	16 Geminorum	7	1842	1	6 18 25.852	3.571	+0.001
311	18 Geminorum ν	5	1839	1	6 19 27.794	3.563	+0.003
312	Canis Majoris	5	1840	6	6 22 14.547	2.223	+0.001
*313	Ursæ Minoris	5	1841.5	11	6 23 21.144	30.898	—0.027
314	13 Monocerotis	5.6	1839	1	6 24 15.170	3.244	+0.003
315	49 Aurigæ	6	1840	1	6 25 07.595	3.781	+0.003
316	14 Monocerotis	6	1840.5	3	6 26 06.499	3.250	+0.005
317	24 Geminorum γ	3	1840.5	9	6 28 27.965	3.464	+0.005
318	54 Aurigæ	6	1842	1	6 29 27.525	3.787	+0.001
319	7 Canis Majoris ν^2	5	1840.5	3	6 29 42.265	2.611	+0.006
320	8 Canis Majoris ν^3	5.6	1840.5	4	6 30 51.334	+2.637	+0.004

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
281	125	18	19.2	−0.71	+0.07	+0.056			
282	70	18	50.7	0.52	+0.04	+0.033			
283	100	36	20.4	0.50	0.00	+0.053			
284	66	44	06.0	0.49	+0.11	−0.045			
285	69	51	54.2	0.49	+0.04	+0.027			
286	85	50	17.8	0.31	+0.03	−0.020			
287	106	28	43.2	0.19	+0.02	−0.147			
288	75	13	08.7	0.14	+0.03	−0.013			
289	104	55	35.1	0.10	+0.01	−0.053			
290	67	47	24.3	−0.01	−0.01	−0.014		759	1970
291	109	09	07.1	+0.06	−0.08	+0.013			
292	20	38	10.8	0.10	+0.09	+0.340		761	1980
293	65	33	06.7	0.16	+0.08	+0.186			
294	127	14	04.0	0.18	0.00	+0.056			
295	70	10	54.7	0.23	+0.06	−0.154			
296	28	26	35.8	0.28	+0.01	+0.313			
297	60	27	01.0	0.46	+0.29	+0.095			
298	67	27	12.0	0.46	+0.01	+0.015			
299	30	56	29.5	0.48	0.00	+0.377			
300	73	48	48.2	0.54	−0.05	+0.124			
301	96	13	53.2	0.62	+0.13	+0.042			
302	80	00	25.9	0.72	+0.16	−0.319			
303	66	20	29.1	0.80	0.00	+0.060			
304	66	28	26.2	0.84	−0.02	+0.058			
305	125	05	30.7	0.95	+0.03	+0.736			
306	67	24	38.5	1.16	+0.13	+0.125	+0.068		
307	123	21	33.8	1.42	+0.09	−0.116			
308	69	07	07.5	1.60	+0.04	+0.021			
309	59	24	56.5	1.59	+0.04	+0.106			
310	69	24	53.2	1.61	+0.04	+0.162			
311	69	41	36.8	1.70	+0.03	+0.084			
312	122	28	59.6	1.96	−0.08	+0.037		810	2109
313	2	44	14.8	2.07	+0.08	−1.266	−1.092		2157
314	82	33	19.9	2.12	+0.02	+0.080			
315	61	51	36.1	2.20	+0.02	+0.365			
316	82	18	33.7	2.28	+0.03	+0.039			
317	73	28	11.6	2.49	+0.02	−0.045			
318	61	36	09.1	2.58	+0.04	−0.035			
319	109	07	25.6	2.59	+0.03	−0.075			
320	108	06	11.9	+2.69	−0.04	+0.054			

CATALOGUE OF 1248 STARS

No.	Constellation.	Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
					h. m. s.	s.	s.
321	25 Geminorum	7.8	1842	2	6 31 15.725	+3.785	+0.003
322	27 Geminorum ε	6	1840	16	6 34 05.160	3.695	+0.005
323	28 Geminorum	6	1842	1	6 34 36.434	3 808	+0.003
324	31 Geminorum ξ	4.5	1839	1	6 36 18.409	3.377	—0.003
325	9 Canis Majoris α	1	1840	26	6 38 05.851	2.680	—0.034
326	35 Geminorum	6	1841	1	6 41 23.310	3.388	+0.006
327	Puppis *x*	5	1841	1	6 41 53.772	2.052	—0.003
328	36 Geminorum *d*	6	1841	5	6 41 57.563	3.601	+0.007
*329	Puppis	5	1842	1	6 41 58.830	2.053	.....
330	13 Canis Majoris κ	4	1840	1	6 43 52.018	2.240	+0.002
331	Canis Majoris	5	1842	2	6 45 03.210	2.180	+0.007
332	37 Geminorum	6	1840	1	6 45 28.067	3.698	—0.001
*333	38 Geminorum *e*	5.6	1841	4	6 45 37.052	3.382	+0.005
334	15 Canis Majoris	5.6	1841	1	6 46 33.081	2.593	+0.001
335	16 Canis Majoris o^1	4	1838.5	2	6 47 29.532	2.488	+0.004
336	17 Canis Majoris	6	1840	1	6 48 08.101	2.589	+0.003
337	18 Canis Majoris μ	5.6	1840.5	2	6 48 46.674	2.749	+0.005
338	39 Geminorum	6.7	1842	1	6 48 55.608	3.716	—0.009
339	20 Canis Majoris ι	4.5	1841.5	6	6 49 00.171	2.675	+0.001
340	21 Canis Majoris ε	2.3	1840	20	6 52 20.398	2.356	+0.004
341	42 Geminorum ω	6	1840	2	6 52 39.710	3.662	+0.003
342	43 Geminorum ζ	4	1841	5	6 54 36.989	3.564	+0.004
343	22 Canis Majoris	4	1842	2	6 55 20.915	2.389	+0.002
344	24 Canis Majoris o^2	4	1841	1	6 56 20.803	2.504	+0.003
345	23 Canis Majoris γ	4	1840	6	6 56 31.093	2.713	+0.005
346	45 Geminorum	6	1841	3	6 59 11.450	3.446	+0.002
347	46 Geminorum τ	5	1840	12	7 00 57.105	3.830	+0.002
348	25 Canis Majoris δ	3.4	1840.5	2	7 01 53.092	2.438	+0.003
349	20 Monocerotis	5.6	1842	1	7 02 16.767	2.980	+0.005
350	Canis Majoris	6	1842	1	7 03 07.274	2.471	0.000
351	22 Monocerotis	4.5	1840.5	5	7 03 41.548	3.065	+0.004
352	51 Geminorum	5	1841.5	2	7 04 11.004	3.450	+0.005
353	26 Canis Majoris	6	1840	1	7 05 39.598	2.454	+0.002
354	53 Geminorum	6	1840.7	4	7 05 57.122	3.757	+0.002
355	Geminorum	7.8	1842	1	7 07 33.727	3.448	—0.003
356	27 Canis Majoris	4.5	1839	4	7 07 44.085	2.444	+0.002
*357	55 Geminorum δ	3.4	1840	21	7 10 33.823	3.593	+0.005
358	57 Geminorum A	6	1840.5	2	7 13 43.155	3.672	0.000
359	Canis Majoris	6	1842	1	7 14 30.112	2.464	+0.012
360	59 Geminorum	6.7	1841	6	7 14 35.870	+3.742	+0.003

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
321	61	39	45.8	+2.73	+0.02	+0.045			
322	64	43	02.6	2.98	+0.02	0.000			
323	60	52	27.8	3.02	+0.03	−0.556			
324	76	56	13.9	3.16	+0.17	−0.141			
325	106	30	06.0	3.32	+1.14	−0.159	−0.067		
326	76	24	33.1	3.60	0.00	−0.240			
327	127	45	21.7	3.64	−0.10	+1.022		845	
328	68	03	23.0	3.65	+0.02	+0.053			
329	127	4-		3.68	....	.....			
330	122	19	41.1	3.82	+0.01	+0.018			
331	124	11	04.0	3.92	+0.13	−0.160		849	2252
332	64	25	52.0	3.96	−0.01	−0.063			
333	76	37	28.0	3.96	+0.06	+0.152			
334	110	01	56.0	4.05	+0.02	+0.311			
335	113	59	18.8	4.12	−0.01	−0.278			
336	110	12	23.9	4.18	+0.05	−0.159			
337	103	50	28.0	4.24	0.00	−0.196			
338	63	42	54.8	4.25	−0.10	+0.148			
339	106	51	06.3	4.33	−0.01	+0.041			
340	118	45	32.3	4.54	−0.01	+0.138	+0.012		
341	65	33	47.8	4.57	+0.01	+0.180			
342	69	12	04.9	4.74	+0.01	+0.039			
343	117	42	35.0	4.80	+0.01	+0.035			
344	113	36	12.5	4.89	−0.01	+0.073			
345	105	24	07.3	4.89	+0.03	−0.087			
346	73	49	08.9	5.12	+0.07	+0.180			
347	59	29	59.0	5.28	+0.06	+0.135			
348	116	08	35.9	5.35	−0.02	−0.168			
349	93	59	32.8	5.39	−0.23	−0.113			
350	114	58	48.2	5.46	+0.19	−0.276		886	2351
351	90	14	01.8	5.51	+0.01	−0.032			
352	73	34	29.8	5.54	−0.01	+0.264			
353	115	40	46.5	5.67	+0.02	+0.188			
354	61	49	51.2	5.70	0.00	−0.128			
355	73	34	39.5	5.83	−0.04	+0.157		893	2387
356	116	04	51.2	5.85	−0.03	+0.075			
357	67	43	45.9	6.08	+0.01	+0.133	−0.003		
358	64	38	54.4	6.34	+0.02	+0.285			
359	115	35	47.7	6.41	+0.06	−0.018		910	2436
360	62	03	34.1	+6.42	−0.02	+0.180			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Prop- mot
							h. m. s.	s.	s.
361	60	Geminorum	ι	4	1839.7	5	7 15 47.071	+3.746	—0.0
362	31	Canis Majoris	η	3	1842	1	7 17 45.931	2.372	0.0
363	3	Canis Minoris	β	3	1841	10	7 18 28.329	3.262	0.0
364	6	Canis Minoris		5.6	1840	2	7 20 53.300	3.345	+0.004
*365		Puppis		6	1841	6	7 21 38.261	2.381	—0.003
366	7	Canis Minoris	δ^1	6	1840.5	2	7 23 47.120	3.119	+0.00
367	68	Geminorum		5.6	1840.5	3	7 24 28.345	3.432	+0.00
368	8	Canis Minoris	δ^2	5.6	1842	2	7 24 48.392	3.150	+0.004
369	69	Geminorum	υ	5	1841	10	7 26 03.496	3.711	+0.004
*370		Puppis	n^1	6	1842	1	7 27 32.732	2.541	—0.00
*371	10	Canis Minoris	α	1.2	1840.5	28	7 30 55.381	3.193	—0.047
372	77	Geminorum	κ	4	1842	1	7 34 47.066	3.685	0.000
373	78	Geminorum	β	2	1840	32	7 35 31.088	3.731	—0.048
374	82	Geminorum		7	1841.5	4	7 38 59.230	3.599	+0.002
375		Puppis	c	4	1840.5	8	7 39 33.549	2.137	—0.005
376		Puppis	o	5.6	1841	1	7 41 26.233	2.493	+0.009
377		Argus	ξ	4	1840.3	6	7 42 34.032	2.522	+0.005
378	13	Canis Minoris	ζ	5.6	1842	1	7 43 24.017	3.117	+0.001
379	83	Geminorum	φ	5	1839.7	7	7 43 41.876	3.687	+0.002
380	85	Geminorum	l	6	1841	2	7 46 19.400	3.513	+0.001
381		Canis Minoris		6.7	1841	1	7 46 49.792	3.266	—0.002
382		Puppis	b	5	1841	3	7 46 59.264	2.122	+0.010
383	1	Cancri		6	1840.5	5	7 47 54.192	3.417	+0.004
384	11	Puppis		5.6	1841	2	7 49 59.165	2.580	+0.003
385	2	Cancri	ω^1	6	1841	7	7 51 14.549	3.643	+0.004
386	3	Cancri		6	1840.5	3	7 51 36.860	3.449	+0.001
387	6	Cancri		5.6	1840	7	7 53 40.867	3.702	+0.002
388		Cancri		6	1841	1	7 55 30.118	3.480	.....
389	8	Cancri		6	1841	3	7 56 09.654	3.353	+0.001
390	55	Camelopardi		5	1841	2	7 56 48.192	6.207	+0.007
391	9	Cancri	μ^1	6	1840	1	7 56 49.249	3.568	+0.001
392		Argus	ζ	3	1839	1	7 57 57.827	2.109	+0.005
*393		Argus	ρ	3.4	1840	19	8 00 44.035	2.560	—0.002
*394	16	Cancri	ζ	6.7	1842	1	8 03 02.091	3.447	+0.009
395	19	Puppis		6	1840	2	8 03 44.973	2.817	0.000
396		Cancri		7	1841	2	8 05 01.385	3.445	—0.005
*397	20	Puppis		5.6	1840	6	8 05 58.814	2.758	+0.003
398	17	Cancri	β	4	1840.5	5	8 07 49.987	3.264	0.000
399	21	Puppis		6.7	1841	2	8 10 03.132	2.752	+0.002
400	18	Cancri	χ	6	1840	1	8 10 20.153	+3.663	+0.005

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
361	61	53	26.1	+6.51	+0.09	+0.131			
262	118	59	43.1	6.68	+0.01	—0.159			
363	81	23	38.4	6.74	+0.05	+0.019			
364	77	40	04.8	6.93	0.00	—0.020			
365	118	49	59.6	7.00	—0.05	+0.171		924	2475
366	87	45	02.9	7.17	—0.05	+0.010			
367	73	50	03.6	7.22	—0.04	—0.035			
368	86	22	27.2	7.26	—0.02	+0.042			
369	62	45	16.2	7.36	+0.08	+0.076			
370	113	07	48.1	7.48	+0.10	—0.218			
371	84	22	12.8	7.75	+0.98	+0.021	+0.032		
372	65	13	28.1	8.06	+0.05	+0.226			
373	61	35	36.8	8.12	+0.06	+0.038	+0.015		
374	66	28	04.9	8.39	—0.05	+0.090			
375	127	35	00.0	8.44	—0.07	+0.239			
376	115	32	39.1	8.59	+0.07	+0.033			
377	114	27	45.5	8.68	—0.01	—0.048			
378	87	49	46.4	8.75	+0.01	—0.003			
379	62	49	33.8	8.77	+0.03	+0.046			
380	69	41	58.4	8.97	+0.04	+0.250			
381	80	43	05.4	9.02	+0.12	+0.192		968	2636
382	128	27	07.5	9.02	+0.07	+0.174			
383	73	47	13.3	9.10	0.00	+0.112			
384	112	27	25.9	9.26	—0.03	+0.135		974	2652
385	64	10	29.8	9.35	—0.01	+0.069			
386	72	15	29.8	9.39	+0.04	+0.060			
387	61	45	47.2	9.54	+0.07	—0.053			
388	70	42	38.4	9.69	......	+0.068			2683
389	76	25	52.0	9.74	+0.05	+0.264			
390	21	03	53.1	9.78	......	+1.152			
391	66	54	47.5	9.78	+0.01	+0.149			
392	129	33	21.6	9.87	+0.06	—0.013			
393	113	50	51.3	10.09	—0.08	+0.145	—0.040	995	
394	71	52	30.8	10.26	+0.11	+0.371			
395	102	27	21.5	10.49	+0.03	—0.907			
396	71	50	50.1	10.41	+0.02	+0.335		1004	2759
397	105	18	39.1	10.48	+0.03	+0.014		1005	
398	80	19	35.4	10.62	+0.06	—0.103			
399	105	47	38.2	10.78	—0.01	+0.208		1010	
400	62	16	09.9	+10.81	+0.37	+0.063			

CATALOGUE OF 1248 STARS

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
401	19	Cancri	λ	6	1839.5	8	8 11 00.810	+3.584	0.000
402		Cancri		6.7	1842	1	8 11 00.906	3.507	+0.017
403		Puppis	q	4.5	1840	2	8 12 34.622	2.252	—0.008
404	20	Cancri	d^1	6	1841	5	8 14 11.830	3.451	0.000
405	21	Cancri		7	1841	1	8 15 09.972	3.290	+0.002
406	22	Puppis		6	1840.5	3	8 15 15.614	2.823	0.000
407	25	Cancri	d^2	6	1840	1	8 16 46.076	3.421	—0.011
*408	23	Cancri	ϕ^2	6.7	1841	1	8 17 05.860	3.645	—0.002
*409	24	Cancri	υ^1	7.8	1841	1	8 17 08.425	3.587	0.000
*410		Hydræ		5	1840.5	2	8 17 40.139	3.006	+0.001
411		Puppis		6	1840.5	3	8 18 09.498	2.591	+0.019
412	2	Hydræ		6	1840.5	2	8 18 27.683	3.004	—0.002
413	28	Cancri	υ^2	6.7	1841	1	8 19 07.191	3.575	0.000
*414	31	Cancri	θ	5.6	1841	9	8 22 27.996	3.437	—0.001
415	33	Cancri	η	6	1839.5	2	8 23 26.786	3.486	+0.001
416	4	Ursæ Majoris	π	5	1841.5	2	8 26 08.868	5.362	+0.006
*417		Hydræ		6	1840.5	7	8 27 20.366	3.205	+0.003
418	4	Hydræ	δ	4	1841	2	8 29 11.067	3.187	—0.002
419		Cancri		6.7	1840	2	8 30 39.349	3.458	—0.005
420	39	Cancri		6	1840.5	3	8 30 53.736	3.467	—0.003
*421		Mali	g	6	1841	2	8 31 02.421	2.562	+0.003
422	41	Cancri	ϵ	6	1840	1	8 31 15.763	3.457	—0.002
423	6	Hydræ		5.6	1842	1	8 32 26.738	2.848	—0.002
424	43	Cancri	γ	5	1839.5	4	8 34 00.911	3.495	—0.005
425	9	Hydræ		5	1841	1	8 34 18.080	2.783	+0.006
426	47	Cancri	δ	4.5	1840.5	15	8 35 35.104	3.423	+0.003
427	11	Hydræ	ϵ	4	1840.5	19	8 38 17.943	3.197	—0.007
428	14	Hydræ		5.6	1840	1	8 41 19.318	3.020	—0.001
429	54	Cancri		6.7	1841	8	8 42 06.474	3.361	—0.007
430	55	Cancri	ρ^2	6	1841.5	3	8 43 03.320	3.630	—0.036
*431		Mali	c	5.6	1840	1	8 43 45.096	2.553	—0.008
432		Cancri		7	1842	1	8 44 10.436	3.397	—0.006
433	58	Cancri	ρ^3	6	1841	8	8 46 04.017	3.615	—0.001
434	16	Hydræ	ζ	4	1840	4	8 46 55.901	3.185	0.000
435	60	Cancri		6	1841	2	8 47 11.144	3.287	+0.002
436	62	Cancri	o^1	6	1841	3	8 48 19.029	3.354	+0.006
437	65	Cancri	α	5	1841	9	8 49 43.760	3.289	+0.005
438		Cancri		7	1841	1	8 50 08.363	3.405	—0.007
439	69	Cancri	ν	6	1841	9	8 53 22.513	3.526	+0.001
440	18	Hydræ	ω	6	1841	7	8 57 32.772	+3.167	+0.003

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.	Annual precession.	Proper motion.	Diff. in AR from the		Numbers in the	
				B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	° ′ ″	″	″	s.	s.		
401	65 28 45.2	+10.85	+0.04	+0.090			
402	68 45 06.9	10.85	—0.02	+0.280		1013	2788
403	126 10 01.7	10.96	0.00	+0.436			
404	71 09 31.6	11.09	0.00	+0.130			
405	78 51 23.4	11.15	0.00	+0.132			
406	102 32 37.4	11.17	—0.01	+0.024		1018	
407	72 25 52.9	11.27	+0.14	+0.086			
408	62 32 52.1	11.30	+0.01	+0.170			
409	64 56 47.7	11.30	+0.18	+0.215			
410	93 23 16.4	11.33	—0.02	+0.139		1027	2825
411	113 31 49.5	11.37	—0.06	—0.022		1029	2827
412	93 27 56.3	11.39	+0.04	+0.283			
413	65 19 46.7	11.44	+0.08	+0.191			
414	71 22 10.1	11.68	+0.05	+0.066			
415	69 01 10.9	11.75	+0.03	—0.084			
416	25 07 17.0	11.94	—0.01	—0.282			
417	82 49 31.2	12.02	+0.09	—0.014		1044	2889
418	83 44 32.4	12.15	—0.02	+0.137			
419	69 53 41.3	12.25	—0.20	—0.011		1049	2914
420	69 25 58.1	12.27	+0.02	—0.044			
421	115 41 55.4	12.28	+0.06	+0.281		1053	2916
422	69 53 43.1	12.30	+0.04	—0.017			
423	101 54 50.9	12.38	+0.03	—0.062			
424	67 57 37.7	12.49	—0.03	—0.149			
425	105 22 23.2	12.51	+0.08	+0.180			
426	71 15 43.7	12.59	+0.24	+0.084			
427	82 59 54.7	12.77	+0.03	—0.107	—0.081		
428	92 51 09.7	12.98	0.00	+0.048			
429	74 03 38.6	13.03	—0.07	+0.104			
430	61 03 47.0	13.09	+0.25	+0.080			
431	117 07 12.2	13.14	+0.01	+0.556		1085	3010
432	72 01 54.1	13.17	+0.10	+0.076		1086	3015
433	61 27 59.0	13.29	+0.04	+0.217			
434	83 26 57.7	13.35	0.00	—0.159			
435	77 45 59.1	13.36	0.00	+0.214			
436	74 04 03.7	13.44	—0.04	—0.031			
437	77 31 36.1	13.58	+0.03	—0.070			
438	71 14 48.4	13.55	+0.08	+0.473		1098	3058
439	64 55 24.2	13.76	+0.07	+0.183			
440	84 16 21.2	+14.03	+0.06	—0.038			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion
							h. m. s.	s.	s.
441	76	Cancri	κ	5.6	1841	1	8 59 04.469	+3.260	+0.003
442	77	Cancri	ξ	5.6	1840	5	9 00 09.028	3.466	+0.002
*443		Mali		5.6	1841	4	9 01 01.711	2.628	+0.007
444		Mali	e	6	1841	1	9 03 09.902	2.539	+0.002
445		Cancri		7	1841	1	9 04 28.549	3.444	+0.005
446	21	Hydræ		6	1841	1	9 04 32.094	2.965	—0.001
447	18	Ursæ Majoris	e	5	1841	1	9 04 37.799	4.377	+0.011
448	22	Hydræ	θ	4.5	1840.3	4	9 06 02.081	3.119	+0.013
449	82	Cancri	π	6	1841	1	9 06 23.442	3.327	—0.001
450	23	Hydræ		6	1841	4	9 08 44.993	2.980	—0.001
451	24	Hydræ		6	1842	2	9 08 51.085	2.941	—0.003
452	83	Cancri		6.7	1840.5	7	9 10 02.591	3.371	—0.008
453	26	Hydræ		5.6	1841	1	9 12 04.172	2.892	+0.003
454	27	Hydræ		5.6	1841.5	3	9 12 40.281	2.931	+0.002
455		Draconis		5	1841	1	9 13 44.090	9.402	—0.063
*456		Mali	h	5	1841.5	3	9 14 24.599	2.653	+0.010
457	1	Leonis	κ	5	1840.5	3	9 15 19.483	3.516	0.000
*458		Mali		5.6	1841.5	3	9 16 16.876	2.602	+0.003
459	30	Hydræ	α	2	1840	14	9 19 43.498	2.950	+0.001
460	4	Leonis	λ	4.5	1839.5	8	9 22 34.924	3.442	+0.001
461	5	Leonis	ξ	5.6	1841.5	5	9 23 19.011	3.250	—0.004
462	6	Leonis	h	6	1841	1	9 23 22.736	3.226	+0.003
463	32	Hydræ	τ^2	6	1841	1	9 23 49.228	3.064	+0.005
464	33	Hydræ		6	1840	1	9 26 33.784	2.995	+0.002
465	7	Leonis		7	1842	1	9 27 07.917	3.293	0.000
466	8	Leonis		6.7	1841	2	9 28 12.471	3.324	0.000
467	35	Hydræ	ι	6	1841	1	9 31 40.987	3.065	+0.008
468	14	Leonis	ο	4	1841	15	9 32 36.354	3.221	+0.008
469	16	Leonis	ψ	6	1838.5	3	9 35 00.521	3.278	+0.003
470	17	Leonis	ε	3	1840.5	17	9 36 45.578	3.427	0.000
471	29	Ursæ Majoris	υ	4.5	1841.5	4	9 39 32.973	4.391	—0.030
472	20	Leonis		7	1840.5	4	9 40 52.315	3.378	—0.002
473	30	Ursæ Majoris	φ	5	1842	2	9 41 10.692	4.150	+0.006
474	4	Sextantis		6	1841	2	9 42 10.310	3.138	—0.005
475	6	Sextantis		7	1842	1	9 43 10.378	3.024	+0.003
476	24	Leonis	μ	3	1840.7	7	9 43 39.210	3.448	—0.018
477	8	Sextantis		6.7	1840.5	4	9 44 35.234	2.974	0.000
478	9	Sextantis		7	1841.5	5	9 45 44.605	3.145	0.000
*479		Leonis		6.7	1841	1	9 47 56.801	3.195	—0.002
480	27	Leonis	ν	5.6	1840.5	11	9 49 36.628	+3.239	+0.002

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
441	78	41	28.4	+14.13	—0.03	—0.131			
442	67	18	41.1	14.19	—0.02	+0.028			
443	115	12	58.1	14.24	+0.01	+0.271		1112	3121
444	119	42	58.8	14.37	+0.11	+0.192		1115	3130
445	68	03	38.7	14.46	+0.01	+0.239		1117	3138
446	96	27	28.2	14.46	—0.01	+0.244			
447	35	19	24.4	14.47	—0.02	—0.101			
448	87	00	51.2	14.55	+0.32	—0.139			
449	74	23	55.4	14.57	—0.02	+0.062			
450	95	41	21.9	14.71	+0.01	+0.073			
451	98	04	46.6	14.72	—0.05	+0.245			
452	71	37	13.0	14.79	+0.16	+0.051			
453	101	18	10.1	14.91	—0.02	+0.002			
454	98	52	47.5	14.94	+0.01	—0.139			
455	7	58	36.1	15.00	+0.04	+1.820		1135	3199
456	115	17	15.3	15.04	—0.11	—0.321		1138	3195
457	63	07	56.9	15.10	+0.03	+0.033			
458	118	09	08.8	15.16	—0.02	—0.404		1142	3207
459	97	58	07.3	15.35	—0.03	+0.038	—0.072		
460	66	19	48.6	15.51	+0.04	+0.044			
461	77	59	39.7	15.55	+0.06	+0.011			
462	79	34	58.3	15.55	+0.05	+0.066			
463	90	28	59.8	15.57	+0.08	—0.202			
464	95	12	19.3	15.72	+0.15	+0.144			
465	74	54	38.8	15.76	+0.07	+0.157			
466	72	50	49.4	15.81	—0.07	+0.081			
467	90	25	11.8	16.00	+0.11	—0.043			
468	79	22	59.6	16.05	+0.05	+0.144			
469	75	15	01.0	16.17	+0.04	—0.169			
470	65	29	32.7	16.26	+0.04	+0.038	+0.049		
471	30	12	12.0	16.40	+0.19	—0.007			
472	68	04	38.1	16.47	+0.01	+0.245			
473	35	11	33.5	16.49	+0.05	+0.242			
474	84	54	39.4	16.53	+0.08	—0.040			
475	93	29	44.6	16.59	—0.01	+0.128			
476	63	14	33.3	16.61	+0.06	+0.090			
477	97	21	14.8	16.66	+0.04	—0.016			
478	84	18	14.6	16.71	0.00	—0.065			
479	80	18	45.2	16.81	0.00	+0.081		1192	3398
480	76	47	39.9	+16.89	+0.01	+0.018			

No.	Constellation.	Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
					h. m. s.	s.	s.
*481	Leonis	6	1842	2	9 49 38.622	+3.186	+0.002
482	29 Leonis π	4.5	1841.5	3	9 51 45.197	3.181	+0.002
483	Leonis	6.7	1841.5	6	9 53 53.129	3.364	+0.001
*484	Hydræ	7.8	1841	5	9 54 47.807	2.916	—0.002
485	Leonis	7	1841.5	6	9 56 59.640	3.273	—0.003
486	30 Leonis η	3.4	1839	2	9 58 36.223	3 284	+0.002
487	32 Leonis α	1	1840	18	9 59 50.769	3.222	—0.015
488	41 Hydræ λ	4.5	1839	2	10 02 47.521	2.937	—0.010
489	34 Leonis	7	1841	3	10 03 01.240	3.235	+0.008
*490	Sextantis	6.7	1841	5	10 03 18.317	2.996	+0.011
491	19 Sextantis [illegible]	7	1841	1	10 04 28.716	3.132	—0.004
492	21 Sextantis	7	1841	3	10 06 10.068	2.990	+0.002
493	Leonis	7	1841.5	4	10 07 32.692	3.281	+0.005
*494	35 Leonis	6	1841	1	10 07 40.264	3.355	—0.014
495	36 Leonis ζ	4.5	1840	6	10 07 47.034	3.353	+0.001
496	37 Leonis	6	1842	1	10 08 06.025	3.233	+0.003
497	40 Leonis	6	1841	3	10 11 01.200	3.297	—0.014
498	41 Leonis γ	2	1840	15	10 11 08.635	3.301	+0.023
499	43 Leonis	6.7	1841.5	7	10 14 37.923	3.147	0.000
500	Velorum r	4.5	1840.5	3	10 15 28.697	2.562	—0.005
501	42 Hydræ μ	4	1840.7	7	10 18 21.267	2.906	—0.006
502	27 Sextantis	6.7	1841	3	10 18 41.952	3.035	0.000
503	Antliæ α	4.5	1840.5	3	10 19 50.432	2.740	—0.005
*504	29 Sextantis	6	1841.5	2	10 21 21.018	3.052	+0.001
505	Antliæ	6	1842	1	10 22 06.039	2.765	+0.003
506	30 Sextantis	5.6	1842	1	10 22 06.515	3.072	0.000
507	31 Sextantis	7	1841	3	10 22 15.012	3.100	+0.005
508	32 Sextantis	7	1841	3	10 23 59.614	3.123	0.000
509	47 Leonis ρ	4	1840	11	10 24 22.900	3.167	+0.005
510	37 Ursæ Majoris	5	1842	1	10 24 48.278	3.931	+0.015
511	48 Leonis	6	1841.5	3	10 26 27.073	3.143	—0.001
*512	Hydræ ϕ^2	6	1841	6	10 28 28.195	2.927	—0.001
*513	Hydræ ϕ^3	5	1840.5	4	10 30 47.518	2.925	—0.005
*514	Ursæ Majoris	5	1841	2	10 31 30.039	4.447	+0.003
515	33 Sextantis	6	1840	2	10 33 15.934	3.062	—0.005
516	40 Leonis Minoris	5.6	1840	1	10 34 13.860	3.321	—0.006
517	34 Sextantis	6	1841.5	3	10 34 21.574	3.109	—0.003
*518	Leonis	5.6	1841	2	10 34 42.266	3.288	—0.005
*519	35 Sextantis	6.7	1841.5	4	10 35 02.448	3.118	+0.002
520	42 Leonis Minoris	4.5	1839	1	10 36 57.380	3.361	+0.002

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
481	80	55	32.9	+16.90	+0.07	—0.078		1194	3407
482	81	11	26.7	16.99	+0.03	—0.053			
483	67	16	53.8	17.09	+0.01	+0.239		1198	3423
484	102	31	39.2	17.14	—0.06	—0.103		1199	3428
485	73	27	58.5	17.24	—0.10	+0.110		1202	3443
486	72	27	34.3	17.31	—0.01	+0.023			
487	77	15	12.9	17.37	0.00	—0.121	—0.034		
488	101	33	56.0	17.49	+0.09	+0.041			
489	75	51	28.8	17.50	+0.11	—0.380			
490	96	31	49.3	17.51	0.00	—0.023		1215	3476
491	84	35	51.3	17.56	+0.03	+0.176			
492	97	12	07.6	17.63	+0.02	+0.028			
493	71	27	56.0	17.69	0.00	+0.002		1220	3506
494	65	42	16.1	17.70	+0.01	+0.174			3507
495	65	47	16.8	17.70	—0.02	+0.154			
496	75	28	35.7	17.71	+0.04	+0.005			
497	69	43	11.4	17.83	+0.23	+0.130			
498	69	21	05.9	17.84	+0.15	+0.115			
499	82	38	49.6	17.97	+0.10	+0.153			
500	130	50	49.5	18.00	+0.06	+0.207		1235	3552
501	106	01	17.1	18.11	+0.12	—0.133			
502	93	34	30.6	18.13	—0.03	—0.008			
503	120	15	18.8	18.17	+0.05	+0.102			
504	91	55	19.5	18.22	+0.04	—0.102		1246	3590
505	118	50	50.5	18.25	+0.05	—0.081		1249	3596
506	89	49	08.6	18.25	+0.06	—0.275			
507	87	01	49.9	18.26	+0.05	+0.102			
508	84	32	09.2	18.32	0.00	—0.026			
509	79	52	21.1	18.33	+0.04	—0.040			
510	32	05	46.0	18.35	+0.02	—0.032			
511	82	13	29.6	18.41	—0.03	—0.047			
512	105	31	05.0	18.47	+0.01	+0.065		1260	3632
513	106	02	51.4	18.55	—0.04	+0.048		1265	3646
514	20	05	23.6	18.58	+0.05	—0.601		1266	3652
515	90	54	08.8	18.63	+0.14	+0.064			
516	62	50	08.6	18.66	+0.06	—0.140			
517	85	34	59.3	18.67	+0.01	—0.086			
518	65	58	33.0	18.68	+0.01	—0.084		1271	3671
519	84	24	53.8	18.69	+0.06	+0.118			
520	58	28	34.3	+18.75	+0.02	+0.120			

CATALOGUE OF 1248 STARS

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
521	37	Sextantis		6.7	1840.5	3	10 37 45.602	+3.130	+0.003
522	52	Leonis	*k*	6	1841.5	3	10 37 56.403	3.196	—0.007
523		Hydræ	b^1	6	1841.5	4	10 39 02.070	2.934	0.000
524	53	Leonis	*l*	6	1839.5	3	10 40 50.553	3.162	+0.002
525		Hydræ	ν	4	1840	9	10 41 44.166	2.948	+0.006
526	41	Sextantis		6	1841.5	5	10 42 16.575	3.008	+0.002
527		Hydræ	b^3	5.6	1841	10	10 45 40.240	2.921	+0.007
*528	54	Leonis		4.5	1840	9	10 46 56.370	3.272	+0.005
529	55	Leonis		6	1841	1	10 47 28.437	3.082	+0.011
530	57	Leonis		7	1841.5	4	10 47 58.143	3.079	+0.007
531		Antliæ		5	1841	11	10 49 16.724	2.773	—0.005
532	7	Crateris	α	4	1839	6	10 51 58.929	2.948	—0.029
533	48	Ursæ Majoris	β	2	1842	1	10 52 08.425	3.676	+0.015
534	58	Leonis	*d*	5	1841	9	10 52 17.794	3.101	+0.003
*535		Ursæ Majoris		7	1841	3	10 53 25.753	3.806	.....
536	61	Leonis	p^1	5.6	1840	1	10 53 40.075	3.060	+0.007
537	50	Ursæ Majoris	α	1.2	1840.3	11	10 53 47.877	3.805	—0.013
538	63	Leonis	χ	4.5	1840	23	10 56 45.563	3.123	—0.019
539		Hydræ	χ^1	5.6	1841.5	6	10 57 38.070	2.892	—0.009
*540		Hydræ	χ^2	6.7	1841	3	10 58 12.799	2.894	+0.005
541	65	Leonis	p^3	5.6	1841	1	10 58 44.429	3.088	—0.025
542	67	Leonis		6	1841.5	5	11 00 13.391	3.235	+0.003
*543		Hydræ		5.6	1841	7	11 01 00.136	2.896	0.000
544	66	Leonis	p^4	7	1841	3	11 01 03.541	3.068	+0.004
545	11	Crateris	β	4	1839	1	11 03 48.072	2.940	+0 006
546	68	Leonis	δ	3	1840	30	11 05 35.448	3.194	+0.017
547	74	Leonis	φ	5	1841.5	3	11 08 31.648	3.057	—0.003
548	75	Leonis		5.6	1840.5	4	11 09 03.422	3.085	+0.008
*549		Leonis		7	1841	1	11 09 59.810	3.137	+0.013
550	12	Crateris	δ	3.4	1840	25	11 11 20.818	3.001	—0.004
551	77	Leonis	σ	4	1840	7	11 12 53.094	3.104	—0.004
552	13	Crateris	λ	6	1841.5	7	11 15 26.304	2.987	—0.018
553	78	Leonis	ι	4	1810	2	11 15 34.872	3.123	+0.015
554	79	Leonis		6	1840	2	11 15 49.771	3.081	+0.004
555	14	Crateris	ε	5	1841	2	11 16 31.852	3.027	+0.001
556	15	Crateris	γ	4	1840	5	11 16 53.681	2.995	—0.006
557	16	Crateris	κ	6	1841.5	7	11 19 06.212	3.023	—0.007
558	84	Leonis	τ	4	1839.5	11	11 19 42.477	3.086	+0.005
559	85	Leonis		6	1841	2	11 21 21.543	3.136	+0.003
560	1	Draconis	λ	3.4	1841	1	11 21 49.857	3.687	—0.004

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
521	82	47	06.4	+18.77	+0.05	—0.128			
522	74	57	46.2	18.78	+0.10	—0.057			
523	106	27	16.2	18.82	—0.01	+0.060		1282	
524	78	36	33.1	18.87	—0.01	+0.063			
525	105	21	29.8	18.90	—0.17	+0.156		1287	
526	98	03	03.0	18.92	+0.02	—0.035			
527	109	16	41.5	19.01	+0.10	+0.130		1292	
528	64	23	53.8	19.05	+0.01	—0.110			
529	88	24	39.4	19.06	0.00	—0.063			
530	88	42	49.8	19.08	—0.03	+0.073			
531	126	16	44.1	19.11	+0.20	+0.354		1299	3755
532	107	26	51.4	19.18	—0.14	—0.131		1300	3766
533	32	45	41.6	19.18	—0.03	—0.105			
534	83	81	30.3	19.19	+0.05	+0.024			
535	27	28	58.7	19.20	....	.....			
536	91	37	26.1	19.22	+0.03	—0.095			
537	27	23	12.0	19.22	+0.09	—0.073	+0.039		
538	81	48	01.7	19.30	+0.08	—0.177			
539	116	25	51.6	19.32	+0.03	—0.070		1311	
540	116	25	27.1	19.33	+0.03	+0.089		1312	
541	87	10	39.2	19.34	+0.10	—0.011			
542	64	28	37.0	19.38	+0.01	—0.009			
543	117	12	51.2	19.40	+0.02	—0.054		1316	3815
544	90	28	04.8	19.40	+0.05	—0.029			
545	111	57	10.8	19.46	+0.10	+0.272			
546	68	36	01.8	19.49	+0.14	+0.188	+0.025		
547	92	46	40.6	19.55	+0.05	—0.102			
548	87	06	37.9	19.56	+0.18	—0.018			
549	77	08	26.7	19.58	+0.15	—0.400			3854
550	103	54	51.0	19.60	—0.17	+0.068	—0.085	1333	
551	83	05	40.2	19.63	+0.02	+0.034			
552	107	54	02.8	19.68	+0.02	+0.014		1337	
553	78	35	22.0	19.68	+0.06	+0.032			
554	87	42	53.1	19.68	+0.03	—0.029			
555	99	58	58.6	19.69	—0.01	—0.148		1340	
556	106	48	19.5	19.70	—0.04	+0.021		1342	
557	101	28	40.8	19.73	—0.02	+0.042		1346	
558	86	15	47.6	19.74	+0.03	—0.113			
559	73	42	08.5	19.77	+0.03	+0.003			
560	19	47	12.8	+19.78	+0.03	+0.187			

No.	Constellation.	Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
					h. m. s.	*s.*	*s.*
561	87 Leonis *e*	4.5	1841.5	7	11 22 08.514	+3.062	+0.004
*562	Leonis	7	1841	1	11 23 48.410	3.050	—0.017
*563	Hydræ	6	1840.5	4	11 24 21.223	2.959	+0.004
*564	Hydræ	4	1840.5	13	11 25 09.008	2.950	—0.010
565	89 Leonis	6	1841	2	11 26 10.769	3.084	—0.008
*566	Hydræ	6	1838	1	11 26 43.956	2.950	—0.055
567	Ursæ Majoris	6	1840.5	3	11 27 52.584	3.173	—0.001
568	21 Crateris *θ*	4.5	1842	2	11 28 34.183	3.042	+0.001
569	91 Leonis *υ*	4.5	1840.5	20	11 28 45.530	3.071	+0.003
570	92 Leonis	5.6	1840.5	8	11 32 27.503	3.136	—0.002
571	27 Crateris *ζ*	4	1840.5	16	11 36 39.628	3.028	+0.004
572	2 Virginis *ξ*	5	1841.5	6	11 37 01.820	3.093	+0.005
573	3 Virginis *ν*	4.5	1841	4	11 37 38.034	3.088	+0.006
574	94 Leonis *β*	2.3	1840.5	23	11 40 53.597	3.102	—0.035
575	5 Virginis *β*	3.4	1840	17	11 42 21.648	3.075	+0.053
576	Hydræ	4	1839.5	2	11 44 50.842	3.013	—0.001
577	64 Ursæ Majoris *γ*	2	1841.5	17	11 45 23.147	3.190	+0.016
578	6 Virginis A^2	6	1840	4	11 46 50.555	3.084	—0.002
579	Hydræ	6	1841	1	11 47 32.793	3.033	+0.006
580	Virginis	7	1841.5	4	11 50 01.749	3.075	+0.004
*581	Virginis	7	1842	1	11 51 22.672	3.067	.....
582	7 Virginis *b*	5.6	1839.5	13	11 51 45.153	3.074	+0.004
583	8 Virginis *π*	5	1841	1	11 52 40.625	3.076	+0.003
584	1 Comæ	6.7	1841.5	6	11 53 32.090	3.086	—0.002
585	Virginis	7	1841.5	5	11 55 34.322	3.073	—0.019
586	2 Comæ	6	1841	1	11 56 04.983	3.080	+0.007
587	9 Virginis *o*	4.5	1840	12	11 57 03.441	3.074	—0.009
588	Virginis	7	1841.5	3	11 57 48.301	3.070	+0.001
589	1 Corvi *α*	4.5	1840	12	12 00 10.489	3.071	+0.010
590	10 Virginis	6	1841	6	12 01 29.413	3.070	+0.004
591	2 Corvi *ε*	4	1840	7	12 01 54.444	3.075	+0.001
592	4 Comæ	6	1841.5	3	12 03 43.698	3.058	—0.001
593	5 Comæ	6	1841.5	2	12 04 00.681	3.061	+0.002
594	Draconis	5	1841	1	12 04 37.759	2.938	+0.011
595	12 Virginis	6	1840.5	8	12 05 16.975	3.065	—0.004
596	69 Ursæ Majoris *δ*	3	1841.5	5	12 07 28.615	3.001	+0.019
597	4 Corvi *γ*	3	1840	13	12 07 35.111	3.084	—0.008
598	6 Comæ	5	1841	1	12 07 52.842	3.058	—0.003
599	7 Comæ	5	1841.5	6	12 08 14.471	3.048	+0.003
600	13 Virginis	6	1840	1	12 10 28.164	+3.071	+0.004

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						A. S. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
561	92	07	17.1	+19.78	+0.05	+0.014			
562	95	35	03.4	19.80	+0.14	+0.130		1353	3920
563	118	23	06.8	19.81	—0.15	—0.047		1354	3922
564	120	58	20.7	19.82	+0.03	+0.168		1356	3928
565	86	03	05.9	19.83	+0.13	+0.189			
566	121	59	02.8	19.84	—0.82	+0.426			3934
567	61	20	04.6	19.86	+0.05	+0.724		1359	3937
568	98	55	03.0	19.86	—0.01	—0.047		1361	
569	89	56	27.9	19.87	—0.01	+0.080			
570	67	45	26.0	19.91	—0.01	+0.163			
571	107	27	38.8	19.96	+0.01	—0.082		1368	
572	80	51	10.1	19.96	+0.04	—0.240			
573	82	34	25.9	19.96	+0.20	—0.036			
574	74	32	00.9	19.99	+0.10	—0.073	—0.105		
575	87	20	00.2	20.00	+0.28	—0.052			
576	123	01	04.5	20.01	+0.03	+0.222		1378	4015
577	35	24	56.5	20.02	+0.02	+0.217	+0.082		
578	80	40	00.4	20.03	+0.02	+0.105			
579	117	35	03.1	20.03	—0.02	+0.033		1381	4032
580	85	37	40.1	20.04	+0.07	—0.101		1383	4039
581	90	5-		20.04	....	.....			
582	85	27	13.7	20.04	+0.04	—0.117			
583	82	29	35.6	20.05	+0.05	+0.175			
584	67	00	49.5	20.05	+0.02	—0.040		1389	
585	83	32	49.1	20.05	+0.09	+0.072		1390	4064
586	67	38	55.8	20.05	—0.01	+0.383		1391	
587	80	22	41.9	20.05	0.00	—0.089			
588	92	14	23.8	20.06	+0.08	—0.139		1393	4077
589	113	50	07.0	20.06	+0.04	+0.039			
590	87	12	12.7	20.05	+0.23	+0.043			
591	111	43	44.2	20.05	—0.02	—0.036			
592	63	14	11.6	20.05	—0.01	+0.068		1402	
593	68	33	54.0	20.05	—0.02	+0.051		1403	
594	11	29	39.7	20.05	—0.02	+0.829		1404	4112
595	78	50	46.0	20.05	0.00	—0.005			
596	32	04	40.8	20.04	+0.06	+0.005			
597	106	39	10.2	20.04	—0.02	—0.089			
598	74	12	32.7	20.04	+0.01	+0.452		1409	
599	65	09	53.4	20.04	+0.03	+0.011		1410	
600	89	53	50.6	+20.03	+0.06	—0.086			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
601	15	Virginis	η	3.4	1840.5	26	12 11 43.299	+3.070	—0.003
*602		Corvi		6	1841	2	12 11 54.092	3.098	—0.004
603	5	Corvi	ζ	5.6	1841	3	12 12 17.192	3.099	—0.008
604	11	Comæ		5	1841	1	12 12 38.045	3.046	—0.009
605	12	Comæ		5	1840	1	12 14 27.039	3.028	+0.002
*606		Corvi		6	1841	1	12 14 44.634	3.110	.....
607	6	Corvi		5.6	1841.5	5	12 15 02.169	3.110	+0.004
*608	13	Comæ		5	1840.5	13	12 16 16.470	3.022	+0.001
609	14	Comæ		5.6	1841	1	12 18 23.848	3.013	+0.003
610	15	Comæ	γ	5	1842	2	12 18 57.612	3.009	—0.004
*611	16	Comæ		5	1839.5	12	12 18 58.705	3.012	+0.007
612		Virginis		6.7	1841	4	12 19 39.373	3.078	—0.016
613		Centauri		4.5	1841	2	12 19 53.394	3.161	—0.009
614		Virginis		7	1841	3	12 20 09.204	3.060	—0.007
615	17	Comæ		5.6	1840	2	12 20 54.515	3.009	+0.004
616	7	Corvi	δ	3	1841	8	12 21 35.664	3.106	—0.001
*617		Virginis		7	1841.5	3	12 22 26.099	3.046	.....
618	21	Comæ		5.6	1841	3	12 23 00.991	3.007	+0.005
619		Virginis		6.7	1841	2	12 23 25.580	3.081	—0.012
620	8	Corvi	η	4.5	1841	1	12 23 50.004	3.109	—0.027
621	21	Virginis	q	5.6	1840.3	9	12 25 31.575	3.093	—0.003
622	9	Corvi	β	2.3	1840.5	27	12 25 59.755	3.134	—0.004
623		Hydræ		5.6	1841	12	12 29 14.154	3.154	+0.004
624		Virginis		6.7	1841	5	12 30 13.058	3.062	—0.002
625		Virginis		6.7	1841	1	12 30 29.877	3.082	—0.004
626	26	Virginis	χ	5.6	1840	2	12 30 59.446	3.093	0.000
627	26	Comæ		6	1841	3	12 31 09.421	2.998	—0.002
*628	29	Virginis	γ	4	1840.5	27	12 33 33.507	3.073	—0.033
629	31	Virginis	d¹	6	1841	2	12 33 50.731	3.044	—0.003
630		Hydræ		6	1840.5	4	12 35 29.822	3.178	+0.003
631	33	Virginis		6	1841	11	12 38 14.889	3.029	+0.022
632	27	Comæ		6	1840	4	12 38 38.878	3.000	+0.004
633	34	Virginis		6	1841	3	12 39 10.330	3.018	+0.005
634	30	Comæ		6	1841	10	12 41 29.364	2.939	—0.007
635		Centauri		6	1839.5	2	12 42 01.255	3.231	+0.001
636		Virginis		7	1841.5	3	12 43 03.852	3.113	—0.007
637	37	Virginis		6	1840.5	4	12 43 28.362	3.053	+0.002
638	31	Comæ		5.6	1840	2	12 43 53.790	2.932	+0.003
639	35	Comæ		5	1841	4	12 45 24.846	2.963	—0.003
640	41	Virginis		6	1840	1	12 45 47.918	+3.008	+0.008

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.	Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
				B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	° ′ ″	″	″	s.	s.		
601	89 46 37.6	+20.03	+0.04	+0.079			
602	111 17 03.0	20.03	—0.05	—0.293			4149
603	111 19 30.6	20.02	+0.03	+0.292			
604	71 19 20.3	20.02	—0.07	+0.275		1419	
605	63 15 53.3	20.01	—0.01	—0.281		1423	
606	114 0-	20.01	....	.....			
607	113 57 03.7	20.01	+0.01	—0.041			
608	63 00 45.4	20.00	+0.02	—0.140		1425	
609	61 50 39.5	19.99	+0.02	+0.188		1428	
610	60 50 28.2	19.98	+0.11	+0.202		1429	
611	62 17 13.4	19.98	0.00	—0.195		1430	
612	93 43 42.8	19.98	+0.03	+0.283		1432	4200
613	128 09 14.9	19.98	+0.25*	+0.064		1433	4202
614	84 43 02.8	19.97	+0.01	—0.036		1434	4204
615	63 12 00.1	19.97	+0.01	—0.415		1435	
616	105 37 25.3	19.96	+0.16	—0.086			
617	79 23 48.6	19.96	......	+0.169		1440	4218
618	64 32 52.9	19.95	+0.05	+0.111		1442	
619	94 10 07.9	19.95	—0.02	+0.340		1443	4225
620	105 18 32.3	19.94	+0.07	—0.096			
621	98 34 03.2	19.93	—0.03	—0.105			
622	112 30 39.6	19.93	+0.07	+0.065	+0.052		
623	116 15 09.1	19.90	+0.11	+0.184		1457	4253
624	87 15 49.4	19.89	+0.09	+0.108		1458	4254
625	93 29 30.4	19.88	—0.04	—0.173		1459	4255
626	97 06 48.2	19.88	+0.04	—0.354			
627	68 03 19.9	19.87	—0.01	—0.019		1461	
628	90 34 15.0	19.84	+0.02	+0.147			
629	83 18 51.0	19.84	+0.04	+0.031			
630	117 26 36.6	19.82	+0.04	+0.032		1470	4278
631	79 33 56.8	19.78	+0.50	+0.079			
632	72 32 47.1	19.77	—0.01	—0.162		1474	
633	77 09 58.2	19.77	+0.06	+0.080			
634	61 34 27.6	19.73	—0.05	+0.154		1479	
635	123 07 30.1	19.72	+0.05	—0.375			4309
636	99 27 57.7	19.70	+0.07	+0.102		1480	4312
637	86 04 18.6	19.70	—0.02	—0.008			
638	61 35 10.6	19.69	0.00	—0.250		1482	
639	67 52 59.3	19.66	+0.04	+0.066		1486	
640	76 42 37.6	+19.66	+0.05	+0.128			

CATALOGUE OF 1248 STARS

No.	Constellation.		Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
						h. m. s.	s.	s.
641	40 Virginis	ψ	5.6	1840.5	13	12 46 02.424	+3.111	+0.004
642	77 Ursæ Majoris	ε	3	1841	4	12 46 58.311	2.654	+0.017
643	43 Virginis	δ	3.4	1839.5	9	12 47 32.784	3.050	—0.027
*644	36 Comæ		4.5	1840.5	15	12 51 00.769	2.974	+0.001
645	44 Virginis	k	6.7	1841	1	12 51 25.225	3.086	+0.002
646	37 Comæ		5	1840.5	2	12 52 36.780	2.883	+0.003
647	38 Comæ		6	1842	2	12 53 14.805	2.971	+0.001
648	47 Virginis	ε	3.4	1840.5	16	12 54 12.842	3.005	—0.012
649	48 Virginis		6.7	1841.5	5	12 55 40.023	3.087	—0.002
650	Virginis		7	1842	1	12 58 00.971	3.155	0.000
*651	Virginis		7	1842	1	12 58 26.661	3.154	.....
652	39 Comæ		6	1841	5	12 58 33.147	2.934	—0.001
653	40 Comæ		6	1841	2	12 58 35.113	2.924	+0.004
654	41 Comæ		4.5	1839.5	3	12 59 29.842	2.884	+0.005
655	49 Virginis	g	5.6	1841	6	12 59 31.314	3.130	+0.006
*656	45 Hydræ	ψ	4.5	1839	2	13 00 27.012	3.213	+0.004
657	51 Virginis	θ	4.5	1840.5	18	13 01 40.293	3.099	+0.001
*658	42 Comæ	α	4.5	1839	1	13 02 12.644	2.952	—0.027
659	53 Virginis		5.6	1841.5	3	13 03 33.373	3.171	+0.009
*660	43 Comæ	β	5	1841	2	13 04 23.868	2.868	—0.056
661	Virginis		6	1841	1	13 04 35.055	2.989	—0.001
662	55 Virginis		6	1841	14	13 05 37.908	3.202	—0.003
663	57 Virginis		5.6	1841	2	13 07 20.412	3.205	+0.024
664	59 Virginis	e	5.6	1840.5	3	13 08 49.960	2.999	—0.020
665	58 Virginis		7	1841	6	13 09 04.645	3.138	—0.003
666	60 Virginis	σ	5.6	1841.5	3	13 09 31.822	3.027	+0.003
667	61 Virginis		4.5	1840	1	13 10 02.769	3.197	—0 069
*668	46 Hydræ	γ	4.5	1840	7	13 10 14.136	3.236	+0.009
669	Centauri.	ι	3	1840.5	12	13 11 37.612	3.368	—0.023
670	62 Virginis		7	1841.5	6	13 11 56.247	3.147	—0.005
671	64 Virginis		6.7	1840.5	2	13 14 05.689	3.026	—0.001
672	67 Virginis	α	1	1840.5	33	13 16 46.363	3.151	0.000
673	68 Virginis	i	5	1840	3	13 18 16.590	3.165	—0 005
674	70 Virginis		5.6	1841.5	4	13 20 36.345	2.950	—0.014
*675	Hydræ		7.8	1841	1	13 20 59.164	3.262	+0.002
676	Centauri		4	1839.5	7	13 21 47.467	3.443	—0.001
677	75 Virginis		6	1841.5	5	13 24 19.332	3.196	—0.001
678	76 Virginis	h	6	1841	2	13 24 33.030	3.150	0.000
679	78 Virginis		6	1840	1	13 26 01.917	3.032	—0.002
680	79 Virginis	ζ	4	1840	14	13 26 32.748	+3.069	—0.014

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
641	98	40	03.4	+19.64	+0.02	−0.016			
642	33	10	13.3	19.63	+0.04	+0.051			
643	85	43	53.9	19.62	+0.09	−0.046			
644	71	43	33.8	19.55	−0.06	+0.259		1493	
645	92	56	46.8	19.54	−0.03	−0.055			
646	58	20	58.3	19.52	−0.02	+0.060		1497	
647	72	00	42.7	19.51	+0.02	+0.195		1498	
648	78	10	43.7	19.50	−0.03	−0.058			
649	92	48	00.5	19.47	+0.02	+0.043			
650	104	03	27.9	19.41	0.00	+0.041		1502	4382
651	104			19.40	....	.....			
652	67	59	08.4	19.40	+0.03	−0.063		1504	
653	66	31	20.3	19.40	+0.03	+0.033		1505	
654	61	30	52.3	19.38	+0.09	−0.018		1507	
655	99	52	59.7	19.38	+0.03	−0.046			
656	112	15	36.8	19.36	+0.06	−0.108		1509	4395
657	94	40	59.0	19.33	+0.05	−0.037			
658	71	37	20.2	19.32	−0.14	+0.394		1513	
659	105	19	59.4	19.29	+0.29	+0.153			
660	61	18	31.1	19.27	−0.91	−0.222		1515	
661	77	35	26.9	19.26	+0.04	−0.125		1516	4423
662	109	05	16.3	19.24	−0.17	−0.022			
663	109	05	22.5	19.19	+0.11	+0.122			
664	79	44	17.5	19.15	−0.16	−0.120			
665	99	42	07.3	19.15	+0.04	+0.015			
666	83	41	02.0	19.14	−0.06	+0.242			
667	107	25	07.1	19.12	+1.03	−0.051			
668	112	19	28.4	19.12	0.00	−0.064		1524	
669	125	51	57.9	19.09	+0.14	−0.008			
670	100	27	42.8	19.07	+0.05	−0.023			
671	84	00	12.8	19.01	+0.05	−0.131			
672	100	19	26.8	18.95	+0.05	+0.043	+0.004		
673	101	52	21.2	18.90	+0.04	−0.030			
674	75	21	53.1	18.82	+0.58	+0.055			
675	112	27	04.8	18.82	−0.01	+0.014		1539	4501
676	128	34	40.5	18.79	+0.05	−0.063		1544	4507
677	104	32	16.4	18.72	+0.10	+0.102			
678	99	20	17.6	18.71	+0.04	+0.130			
679	85	31	01.4	18.66	+0.04	+0.297			
680	89	46	31.6	+18.65	−0.06	−0.022			

CATALOGUE OF 1248 STARS

No.		Constellation.		Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
681	80	Virginis		6	1841	1	13 27 12.291	+3.110	+0.003
682		Hydræ		6.7	1841	6	13 27 56.928	3.311	—0.018
*683		Hydræ		6	1840.5	2	13 29 43.942	3.351	—0.011
684	1	Bootis		6	1841	7	13 33 01.970	2.870	—0.003
685	82	Virginis	m	5.6	1840	6	13 33 13.261	3.144	—0.004
686	2	Bootis		6	1840	1	13 33 28.136	2.843	0.000
687	83	Virginis		6	1840	2	13 35 52.518	3.220	+0.004
688	1	Centauri	i	5	1840	2	13 36 37.081	3.415	—0.029
*689		Hydræ		6	1841	1	13 36 42.422	3 330	—0.007
*690	85	Virginis		6	1841	6	13 36 58.832	3.218	0.000
691	86	Virginis		6	1840	7	13 37 25.209	3.184	+0.001
692		Centauri	μ	4	1840	1	13 40 01.196	3.573	—0.007
693	2	Centauri	g	5	1841.5	3	13 40 11.918	3.447	+0.002
694	89	Virginis		5.6	1840.5	11	13 41 11.341	3.249	—0.004
*695	3	Centauri	k	4.5	1839.5	13	13 42 37.111	3.435	+0.005
*696	4	Centauri	h	5	1841	7	13 44 01.357	3.424	+0.004
697	8	Bootis	η	3	1840.5	31	13 47 04.047	2.861	+0.001
698	9	Bootis		5	1840	2	13 49 15.790	2.740	+0.006
*699	47	Hydræ		6	1840	1	13 49 33.698	3.347	—0.002
700	48	Hydræ		6	1841	5	13 51 03.528	3.351	—0.012
701	93	Virginis	τ	4.5	1840	16	13 53 30.617	3.045	+0.005
702	11	Bootis		6	1841	7	13 53 55.098	2.730	—0.005
703		Virginis		6.7	1841	1	13 55 47.784	3.235	+0.003
704	49	Hydræ	π	4.5	1839.5	11	13 57 16.874	3.389	+0.007
705	5	Centauri	θ	2	1840.5	18	13 57 17.671	3.539	—0.037
706	11	Draconis	α	3.4	1841	2	14 00 03.687	1.627	—0.009
707	96	Virginis		7	1841	4	14 00 29.717	3.184	+0.003
708		Virginis		6	1841	6	14 02 06.922	3.260	—0.005
709	12	Bootis	d	5.6	1840	1	14 03 05.841	2.739	+0.003
710	98	Virginis	κ	4	1840.5	29	14 04 22.210	3.187	+0.007
711	15	Bootis		6	1840	1	14 07 01.343	2.936	+0.004
712	16	Bootis	α	1	1840.5	30	14 08 21.948	2.812	—0.078
*713	100	Virginis	λ	4.5	1840.5	18	14 10 27.778	3.232	+0.004
714	18	Bootis		6	1840	2	14 11 31.917	2.893	+0.010
715	20	Bootis		6	1840	3	14 12 10.950	2.847	—0.008
*716		Centauri		6	1839	1	14 13 12.638	3.661	—0.005
717	103	Virginis	υ^2	6	1841	1	14 13 44.064	3.086	—0.003
718	51	Hydræ		6	1841	3	14 13 53.652	3.447	—0.011
719	2	Libræ		6	1841	3	14 14 49.673	3.215	+0.001
720		Libræ		6	1840	2	14 15 41.927	3.404	+0.001

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
681	94	34	44.4	+18.62	−0.05	+0.101			
682	115	40	34.4	18.60	+0.04	+0.338		1552	4541
683	118	44	23.0	18.54	+0.02	+0.282		1553	4548
684	69	13	58.2	18.43	0.00	+0.250			
685	97	53	34.2	18.42	−0.01	−0.089			
686	66	41	23.9	18.41	−0.01	+0.126			
687	105	22	20.5	18.33	+0.06	+0.018			
688	122	13	52.3	18.30	+0.19	−0.149			
689	115	18	35.9	18.30	+0.04	+0.482		1563	4581
690	104	57	44.2	18.29	+0.11	+0.072			
691	101	37	19.2	18.27	0.00	−0.111			
692	131	40	24.0	18.17	+0.10	+0.766			
693	123	38	55.2	18.17	+0.15	−0.062			
694	107	20	03.7	18.13	+0.05	−0.019			
695	122	11	52.6	18.08	+0.11	+0.271			
696	121	08	03.2	18.02	+0.06	+0.087			
697	70	47	47.9	17.91	+0.35	+0.087	+0.040		
698	61	43	14.4	17.82	+0.07	+0.100			
699	114	11	14.8	17.80	+0.04	+0.348		1591	4657
700	114	13	30.9	17.74	+0.09	+0.078		1592	
701	87	40	40.5	17.64	+0.07	+0.047			
702	61	50	14.6	17.63	−0.02	+0.128			
703	104	11	55.7	17.55	+0.03	−0.116		1600	4679
704	115	54	27.8	17.48	+0.14	+0.254		1603	4685
705	125	34	45.9	17.48	+0.63	+0.221			
706	24	51	29.2	17.36	+0.02	+0.117			
707	99	34	24.0	17.34	0.00	+0.087			
708	105	32	35.5	17.27	+0.06	+0.172		1610	4700
709	64	08	49.7	17.23	+0 06	−0.229			
710	99	31	33.1	17.17	−0.01	0.000			
711	79	08	33.4	17.05	+0.17	+0.403			
712	69	58	54.8	16.99	+1.96	−0.012	+0.017		
713	102	37	51.3	16.89	−0.03	−0.002			
714	76	15	08.9	16.84	−0.07	+0.257			
715	72	57	22.2	16.81	−0.10	+0.030			
716	128	46	33.9	16.76	0.00	+0.358			4759
717	91	15	10.7	16.73	+0.03	−0.046			
718	117	00	52.5	16.73	+0.12	−0.068		1630	
719	100	58	46.6	16.69	+0.09	+0.093			
720	114	04	32.4	+16.64	+0.02	+0.147		1633	4767

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession	Proper motion.
							h. m. s.	s.	s.
*721		Virginis		5.6	1840.5	4	14 16 13.825	+2.985	—0.006
722	52	Hydræ		5.6	1840.5	8	14 18 49.410	3.489	+0.003
723	105	Virginis	φ	5	1840	4	14 19 57.888	3.091	—0.002
724	106	Virginis		6	1840	2	14 20 15.964	3.154	+0.001
725	25	Bootis	ρ	4	1840.5	15	14 24 56.038	2.594	—0.004
726		Centauri	η	3	1841	3	14 25 22.710	3.770	—0.004
727	28	Bootis	σ	5	1840	4	14 27 42.775	+2.598	+0.017
728	5	Ursæ Minoris		4	1841	1	14 27 56.644	—0.256	0.000
729		Libræ		6.7	1841	8	14 28 29.667	+3.237	—0.060
730		Lupi	α	3	1839.5	6	14 31 20.106	3.940	—0.004
*731	29	Bootis	π	4.5	1840.5	11	14 33 12.584	2.816	0.000
732	30	Bootis	ζ	3.4	1841.5	3	14 33 30.625	2.857	+0.004
733	107	Virginis	μ	4.5	1840	2	14 34 38.117	3.143	+0.011
734	34	Bootis		4.5	1840	2	14 36 23.542	2.637	+0.005
735	35	Bootis	ο	4.5	1841	1	14 37 46.930	2.800	0.000
736	36	Bootis	ε	3	1840.5	35	14 37 59.974	2.623	—0.001
*737	8	Libræ		6	1840	5	14 41 50.735	3.309	—0.003
738	9	Libræ	α	3	1840.5	36	14 42 02.316	3.310	—0.002
739	12	Libræ		6	1842	4	14 45 03.570	3.463	+0.002
740	13	Libræ	ξ^1	6	1840.5	8	14 45 42.269	3.247	—0.003
*741		Libræ		6	1840.5	16	14 48 08.346	3.406	+0.068
742	14	Libræ		8	1842	1	14 48 11.344	3.484	+0.001
*743		Centauri	κ	3	1839.5	3	14 48 47.209	3.864	—0.003
744	17	Libræ		7	1841	1	14 49 33.759	3.238	—0.001
745		Bootis		6	1840	3	14 49 44.260	2.794	+0.003
746	18	Libræ		6.7	1840.5	2	14 50 14.773	+3.238	0.000
747	7	Ursæ Minoris	β	3	1841.5	17	14 51 14.372	—0.276	—0.007
748	19	Libræ	δ	5	1840	3	14 52 25.980	+3.197	—0.001
749	20	Libræ		3.4	1840.5	31	14 54 43.366	3.494	0.000
750	43	Bootis	ψ	5	1840	1	14 57 35.483	2.882	—0.010
751	21	Libræ	ν^1	6.7	1840	1	14 57 43.254	3.333	+0.001
752	22	Libræ	ν^2	6.7	1841	8	14 57 53.792	3.336	—0.003
753	45	Bootis	c	5	1841	7	15 00 16.541	2.619	+0.013
754	46	Bootis	b	6	1842	4	15 01 29.385	2.587	+0.003
755	24	Libræ	ι^1	5.6	1840.5	19	15 03 06.950	3.403	+0.002
756	26	Libræ		7	1842	3	15 05 32.527	3.370	0.000
757	27	Libræ	β	2.3	1841	26	15 08 24.318	3.222	—0.003
758	28	Libræ		6.7	1840.5	5	15 11 50.103	3.386	+0.003
759	29	Libræ	o^1	7	1841.5	6	15 12 05.315	3.337	+0.005
760	6	Serpentis		6	1842	1	15 12 53.609	+ 3.048	—0.002

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	B. A. C.	A. S. C.
	°	′	″	″	″	s.	s.		
721	83	26	58.7	+16.61	—0.03	+0.005		1636	4773
722	118	46	04.9	16.49	+0.04	—0.090		1637	
723	91	30	25.1	16.43	+0.02	—0.092			
724	96	10	40.7	16.42	+0.05	+0.134			
725	58	55	23.1	16.17	—0.13	+0.008			
726	121	27	02.1	16.15	+0.12	+0.150			
727	59	33	24.7	16.03	—0.12	+0.095			
728	13	35	33.6	16.02	+0.03	+0.064			
729	101	37	16.1	15.99	—0.34	—0.103		1651	4828
730	136	41	47.1	15.84	+0.08	+0.536			
731	72	53	30.1	15.73	—0.02	+0.194			
732	75	34	54.0	15.73	0.00	+0.005			
733	94	57	30.9	15.66	+0.33	—0.033			
734	62	47	18.2	15.56	—0.01	+0.052			
735	72	21	14.7	15.49	+0.02	+0.260			
736	62	14	52.0	15.47	0.00	—0.006	—0.025		
737	105	19	38.6	15.26	+0.07	—0.115			
738	105	22	21.3	15.25	+0.07	+0.036	+0.012		
739	113	58	57.0	15.07	+0.03	+0.210			
740	101	14	29.8	15.04	+0.05	+0.119			
741	110	41	17.6	14.89	+1.68	+0.356		1690	4923
742	114	47	35.6	14.89	+0.14	+0.184			
743	131	27	24.3	14.86	—0.01	+0.309		1693	
744	100	30	30.5	14.81	+0.05	+0.129			
745	72	57	45.0	14.80	—0.05	+0.250		1698	4933
746	100	29	46.4	14.77	+0.12	—0.207			
747	15	11	25.5	14.72	+0.06	—0.540	—0.584		
748	97	52	45.0	14.64	+0.01	—0.020			
749	114	38	53.3	14.50	+0.08	+0.006			
750	62	25	28.7	14.33	0.00	+0.013			
751	105	37	53.4	14.32	+0.03	+0.514			
752	105	51	35.9	14.31	+0.01	—0.008			
753	64	30	12.9	14.17	+0.16	+0.111			
754	63	04	51.3	14.09	—0.02	—0.005			
755	109	10	50.5	13.99	+0.02	+0.150			
756	107	09	58.8	13.84	+0.02	—0.113			
757	98	47	16.7	13.65	0.00	+0.028	+0.036		
758	107	34	20.1	13.43	+0.07	+0.133			
759	104	57	57.4	13.42	—0.07	+0.035			
760	88	41	51.6	+13.36	+0.08	+0.049			

No.	Constellation.	Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual. precession.	Proper motion.
					h. m. s.	s.	s.
761	Lupi ϕ^2	5	1840	2	15 12 57.492	+3.803	—0.004
762	Libræ	6	1841	1	15 15 06.126	3.281	—0.003
763	31 Libræ ε	5.6	1841	10	15 15 31.967	3.244	—0.002
764	9 Serpentis τ^1	5.6	1840.5	4	15 18 22.170	2.779	+0.001
765	32 Libræ ζ^1	6	1841	10	15 19 14.584	3.367	+0.005
766	10 Serpentis	5.6	1840	1	15 20 33.631	3.028	0.000
767	3 Coronæ Bor. β	4	1839.5	7	15 21 13.984	2.485	—0.005
768	12 Draconis ι	3	1841	1	15 21 22.775	1.321	+0.010
769	34 Libræ ζ^3	6	1840	2	15 21 39.094	3.367	+0.004
770	Libræ	6	1841	2	15 23 26.102	3.433	—0.009
771	35 Libræ ζ^4	6	1841	8	15 23 53.416	3.375	+0.004
772	Lupi γ	4	1840	1	15 24 30.649	3.964	—0.004
773	11 Serpentis	6	1840	1	15 24 43.045	3.082	+0.004
774	38 Libræ γ	4.5	1840	2	15 26 35.152	3.337	+0.006
775	5 Coronæ Bor. α	2	1840.5	39	15 27 54.890	2.528	+0.011
776	42 Libræ	5.6	1839.5	2	15 30 50.074	3.528	+0.001
777	Lupi	6	1839	4	15 32 16.814	3.873	—0.015
778	43 Libræ κ	5	1841	15	15 32 44.349	3.443	+0.001
779	19 Serpentis τ^6	6	1840	1	15 33 37.761	2.752	+0.003
780	44 Libræ η	4.5	1839	1	15 35 05.268	3.362	+0.007
781	24 Serpentis α	2.3	1841	32	15 36 23.441	2.939	+0.014
782	32 Serpentis μ	3.4	1840.5	5	15 41 16.468	3.127	0.000
783	1 Scorpii b	5	1840.5	26	15 41 22.184	3.589	+0.001
784	2 Scorpii A	5	1841	26	15 44 01.112	3.584	+0.001
785	Scorpii	6	1842	1	15 44 25.226	3.553	+0.001
786	5 Scorpii ρ	4	1840.5	7	15 47 01.253	3.684	+0.003
787	6 Scorpii π	3.4	1840.5	13	15 49 11.147	+3.610	+0.003
788	16 Ursæ Minoris ζ	4	1841.5	14	15 49 54.997	—2.365	+0.029
789	7 Scorpii δ	3	1840.5	12	15 50 53.029	+3.531	+0.003
790	50 Libræ	6	1840	5	15 52 09.688	3.229	+0.006
*791	Serpentis	6	1841.5	2	15 52 54.903	2.974	+0.001
792	Scorpii	6	1842	1	15 53 41.258	3.611	—0.006
793	5 Herculis τ	6	1841	1	15 54 03.087	2.695	—0.002
794	44 Serpentis π	4.5	1841	1	15 55 24.534	2.579	+0.002
*795	8 Scorpii β	2	1840.5	30	15 56 08.581	3.474	+0.003
*796	. Scorpii	5.6	1839	1	15 56 09.102	3.474	—0.005
797	10 Scorpii ω^2	4.5	1841	1	15 58 01.964	3.500	+0.007
798	Scorpii	6	1841.5	2	15 58 23.260	3.630	+0.010
799	13 Draconis θ	3.4	1841.5	2	15 58 53.780	1.150	—0.027
800	45 Serpentis	6	1841	7	15 59 59.427	+2.860	+0.002

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
761	126	16	44.7	+13.36	+0.07	+0.081			
762	101	47	36.6	13.22	+0.09	+0.136		1746	5070
763	99	44	35.7	13.19	+0.19	—0.133			
764	74	00	13.4	13.00	—0.08	—0.280			
765	106	09	11.2	12.94	+0.04	+0.054			
766	87	35	49.5	12.85	+0.04	—0.199			
767	60	20	20.6	12.81	—0.07	—0.206			
768	30	28	17.7	12.79	—0.02	—0.005			
769	106	03	29.6	12.78	+0.03	—0.396			
770	109	07	09.3	12.66	+0.08	+0.262		1758	5109
771	106	18	15.5	12.63	—0.01	—0.074			
772	130	37	22.4	12.58	+0.17	+0.439			
773	90	38	20.5	12.58	+0.09	—0.755			
774	104	15	02.1	12.45	—0.02	+0.122			
775	62	44	34.2	12.35	+0.07	+0.080	+0.034		
776	113	17	30.1	12.15	0.00	+0.054			
777	126	54	15.4	12.06	+0.08	+1.324			5171
778	109	09	15.1	12.02	+0.08	—0.021			
779	73	27	13.9	11.95	—0.06	—0.149			
780	105	09	26.5	11.85	+0.05	+0.288			
781	83	04	00.2	11.76	—0.06	+0.141	+0.007		
782	92	56	06.4	11.41	+0.01	—0.192			
783	115	15	32.6	11.40	+0.04	+0.014			
784	114	50	37.0	11.21	+0.02	—0.038			
785	113	29	40.5	11.18	0.00	—0.124		1810	5254
786	118	44	26.6	10.99	+0.02	—0.057			
787	115	38	51.4	10 83	+0.06	—0.023			
788	11	42	59.8	10.78	0.00	—0.063	—0.093		
789	112	09	36.5	10.71	+0.01	+0.029			
790	97	57	09.8	10.62	+0.01	—0.232			
791	85	07	15.3	10.56	—0.04	+0.003		1828	5309
792	115	24	48.6	10.50	+0.13	—0.032		1829	5314
793	71	44	05.6	10.47	—0.17	—0.033			
794	66	44	48.9	10.37	—0.08	+0.204			
795	109	21	42.1	10.32	+0.02	+0.071	+0.006		
796	109	21	29.8	10.31	+0.09	+0.072			5330
797	110	25	47.2	10.17	+0.02	+0.094			
798	115	53	31.4	10.15	+0.07	+0.120		1840	5347
799	31	00	20.9	10.11	—0.32	—0.230			
800	79	40	34.4	+10.03	+0.06	—0 203			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	m.	s.	s.	s.
*801	46	Serpentis		7	1842	4	16	00	28.347	+2.856	—0.003
802	47	Serpentis		6	1840	1	16	00	45.515	2.888	+0.006
803	7	Herculis	κ	5.6	1840	2	16	00	51.091	2.705	—0.005
804	12	Scorpii	c^1	6.7	1841	1	16	02	23.558	3.689	+0.001
805	13	Scorpii	c^2	5	1842	1	16	02	27.603	3.677	+0.010
*806		Scorpii		6	1839	3	16	02	40.901	3.473	+0.008
807	14	Scorpii	ν	4	1841.5	7	16	02	42.248	3.473	+0.004
808	15	Scorpii	ψ	5	1841.5	6	16	03	15.512	3.269	+0.001
809	1	Ophiuchi	δ	3	1840.5	27	16	05	57.979	3.138	—0.001
810		Scorpii		5.6	1840	1	16	08	23.250	3.704	—0.003
811	2	Ophiuchi	ε	3	1841	1	16	09	51.544	3.159	+0.008
*812	20	Scorpii	σ	4	1840	25	16	11	28.475	3.631	+0.002
*813	20	Herculis	γ	3.4	1840.5	21	16	14	51.795	2.646	—0.001
814	19	Coronæ Bor.	ξ	5	1840	4	16	15	51.751	2.341	—0.001
*815	5	Ophiuchi	ρ	6.7	1842	1	16	16	00.056	3.583	+0.002
816	21	Scorpii	α	1	1840.5	42	16	19	36.470	3.663	+0.004
817	14	Draconis	η	3	1841.5	22	16	21	50.091	0.795	+0.023
818	9	Ophiuchi	ω	5	1840	5	16	22	39.577	3.541	+0.004
819	27	Herculis	β	3	1839.5	9	16	23	20.490	2.582	—0.006
820	29	Herculis	h	4.5	1841.5	2	16	25	06.982	2.814	—0.008
821	23	Scorpii	τ	3.4	1840.5	17	16	25	56.024	3.719	+0.005
822	13	Ophiuchi	ζ	3.4	1840	8	16	28	21.040	3.293	+0.005
*823	33	Herculis		7	1841	10	16	29	05.441	2.910	—0.001
*824		Ophiuchi		5	1841	10	16	32	19.541	3.460	0.000
825		Scorpii		6.7	1840	3	16	35	00.367	3.739	—0.006
826	25	Scorpii		6.7	1841	4	16	37	04.090	3.660	+0.006
827	43	Herculis	i	5	1840	1	16	38	09.180	2.875	+0.001
828	26	Scorpii	ε	3	1841	13	16	39	48.997	3.918	—0.044
829	18	Ophiuchi		6	1842	2	16	40	00.636	3.639	—0.001
830	47	Herculis	k	5.6	1840.5	2	16	42	33.301	2.904	+0.005
831	21	Ophiuchi		6	1842	4	16	43	18.216	3.038	+0.004
832	50	Herculis		5.6	1840	4	16	44	24.365	2.338	0.000
833	25	Ophiuchi	ι	4	1840.7	8	16	46	26.179	2.837	—0.001
834		Ophiuchi		6	1841	3	16	46	47.883	3.447	+0.009
835	54	Herculis		5.6	1840.5	4	16	48	20.189	2.640	—0.008
*836	27	Ophiuchi	κ	4	1840.5	13	16	50	05.756	2.855	—0.017
837	29	Ophiuchi		6	1840	2	16	52	30.115	3.502	—0.001
*838	58	Herculis	ε	3	1840.5	18	16	54	10.130	2.295	—0.001
839	19	Draconis	h^1	5	1841	1	16	55	09.443	0.269	+0.032
*840		Herculis		5.6	1840	2	16	55	48.110	+2.743	+0.005

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
801	79	29	15.5	+10.00	+0.05	+0.007			
802	81	02	07.4	9.97	+0.03	—0.015			
803	72	31	17.7	9.96	0.00	—0.259			
804	117	59	38.5	9.85	+0.04	+0.028			
805	117	30	15.2	9.84	+0.01	—0.127			
806	109	01		9.82	....	.....			
807	109	02	16.4	9.82	—0.03	—0.122			
808	99	38	38.8	9.78	+0.04	—0.128			
809	93	16	37.2	9.57	+0.11	—0.021	—0.053		
810	118	12	32.9	9.39	+0.19	+0.080		1864	5429
811	94	17	48.8	9.27	—0.04	+0.106			
812	115	12	09.5	9.15	0.00	+0.025			
813	70	28	00.2	8.88	—0.05	—0.045			
814	58	43	55.8	8.80	—0.14	—0.119			
815	113	04	17.3	8.79	—0.02	+0.016			
816	116	04	13.3	8.51	+0.03	+0.020	—0.021		
817	28	07	20.2	8.33	—0.08	—0.079	+0.003		
818	111	07	01.9	8.27	0.08	—0.023			
819	68	09	24.0	8.21	—0.01	—0.180			
820	78	09	45.6	8.07	+0.05	—0.368			
821	117	52	36.4	8.00	—0.01	—0.016			
822	100	14	13.3	7.80	—0.03	—0.240			
823	82	33	43.0	7.75	—0.05	—0.049			
824	107	25	32.4	7.49	—0.03	—0.039		1907	5579
825	118	12	16.3	7.27	0.00	+0.017		1908	5603
826	115	13	54.7	7.10	+0.24	—0.010			
827	81	07	13.4	7.01	—0.04	—0.110			
828	123	59	43.1	6.87	+0.30	+0.067			
829	114	21	03.0	6.86	+0.02	+0.216			
830	82	28	13.6	6.65	—0.02	—0.059			
831	88	30	19.0	6.59	—0.01	—0.084			
832	59	54	59.6	6.49	0.00	—0.065			
833	79	33	57.7	6.33	+0.04	—0.291			
834	106	32	39.7	6.30	—0.10	—0.177		1934	5695
835	71	18	20.5	6.17	—0.05	—0.131			
836	80	22	16.3	6.02	—0.02	—0.224			
837	108	38	31.1	5.82	—0.01	+0.155			
838	56	49	59.8	5.68	—0.07	—0.100			
839	24	37	14.8	5.59	—0.01	—0.087			
840	75	40	22.8	+5.54	+0.05	—0.220		1953	5749

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	m.	s.	s.	s.
841		Ophiuchi		6	1840	1	16	57	17.550	+3.086	+0.004
842	60	Herculis		5	1841	8	16	57	57.595	2.774	+0.007
843		Ophiuchi		6	1840	2	16	59	58.492	3.090	+0.006
845		Scorpii	η	3	1839.5	7	17	00	42.776	4.276	—0.007
845	35	Ophiuchi	η	2.3	1840.5	9	17	01	12.364	+3.429	+0.005
846	22	Ursæ Min.	ε	4	1841.5	15	17	02	35.649	—6.496	—0.055
*847		Ophiuchi		6.7	1841	4	17	04	16.758	+3.726	—0.002
*848	36	Ophiuchi	A	5	1840.5	13	17	05	31.253	3.714	—0.032
*849	64	Herculis	α	3.4	1840.5	16	17	07	21.202	2.732	+0.002
850	22	Draconis	ζ	3	1841.5	3	17	08	19.388	0.155	+0.002
851	41	Ophiuchi		4.5	1840	2	17	08	24.121	3.077	+0.005
852	65	Herculis	δ	3.4	1839.5	5	17	08	27.535	2.462	—0.003
853	40	Ophiuchi	ξ	5	1840	2	17	11	25.162	3.571	+0.021
854	42	Ophiuchi	θ	3.4	1840.5	23	17	12	11.380	3.676	+0.003
855	43	Ophiuchi		5	1841	1	17	13	17.632	3.766	+0.003
856	70	Herculis		5.6	1840	1	17	14	18.937	2.469	+0.001
*857		Ophiuchi		6	1840.5	2	17	15	08.092	3.531	—0.011
*858		Ophiuchi		6	1841	2	17	15	19.686	3.657	+0.004
859	44	Ophiuchi	b	5.6	1841	7	17	16	36.272	3.655	+0.004
860	45	Ophiuchi	d	5	1840	9	17	17	08.770	3.820	—0.002
861	49	Ophiuchi	σ	4.5	1841	1	17	18	34.606	2.972	+0.005
862	34	Scorpii	υ	3.4	1840	2	17	19	53.748	4.068	+0.002
863		Herculis		6	1841.5	5	17	19	54.911	2.586	+0.007
864		Ophiuchi		6	1841	1	17	20	40.329	3.060	0.000
865	51	Ophiuchi	c^2	5	1841	8	17	21	39.531	3.652	+0.007
866	35	Scorpii	λ	3	1840	5	17	22	45.494	4.064	+0.007
867		Ophiuchi		6	1841.5	3	17	23	20.179	3.005	0.000
868	76	Herculis	λ	4.5	1840.5	12	17	24	16.340	2.420	+0.001
869	55	Ophiuchi	α	2	1841	22	17	27	30.576	2.773	+0.008
870		Scorpii	κ	3	1840.5	10	17	31	25.649	4.142	+0.003
871	56	Serpentis	o	4.5	1840.5	7	17	32	25.446	+3.372	—0.003
872	27	Draconis	f	5	1841	2	17	32	36.632	—0.252	—0.003
873	58	Ophiuchi		5	1841.5	3	17	33	50.844	+3.597	—0.003
874	69	Ophiuchi	β	3	1840.3	5	17	35	34.190	2.963	+0.001
875	3	Sagittarii		5	1840.5	18	17	37	29.609	3.771	—0.004
876		Sagittarii		5.6	1842	2	17	38	47.112	3.891	—0 004
877	62	Ophiuchi	γ	4	1842	1	17	39	52.271	3.006	—0.002
878	86	Herculis	μ	4	1840.5	17	17	40	12.011	2.368	—0.024
879	87	Herculis		5	1841	4	17	42	20.036	2.430	0.000
880	63	Ophiuchi		6.7	1841	10	17	45	03.287	+3.689	+0.004

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Dif. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
841	90	40	02.0	+5.42	+0.14	—0.080		1956	5760
842	77	02	02.4	5.36	—0.02	—0.025			
843	90	51	47.0	5.19	+0.12	—0.098		1959	5774
844	133	01	10.5	5.13	+0.33	+0.836			
845	105	31	12.4	5.06	—0.12	—0.086			
846	7	42	37.7	4.97	0.00	+0.417	+0.403		
847	116	47	07.7	4.83	+0.12	+0.078		1965	5800
848	116	21	38.5	4.72	+1.14	+0.173			
849	75	25	20.5	4.57	—0.05	—0.008	—0.094		
850	24	05	16.9	4.48	—0.01	—0.972			
851	90	15	31.4	4.47	+0.06	—0.229			
852	64	58	03.8	4.47	+0.15	—0.165			
853	110	56	02.1	4.22	+0.19	—0.008			
854	114	49	59.9	4.15	+0.05	+0.030			
855	117	58	46.0	4.06	0.00	—0.208			
856	65	20	13.1	3.97	+0.01	+0.047			
857	111	17	06.6	3.90	+0.08	+0.022		1990	5866
858	114	05	22.6	3.88	—0.03	—0.084		1991	5868
859	114	01	12.8	3.77	+0.08	+0.112			
860	119	42	53.9	3.72	+0.20	+0.190			
861	85	42	54.5	3.60	—0.02	—0.094			
862	127	09	37.5	3.49	+0.08	+0.148			
863	69	46	43.4	3.48	+0.13	+0.111		2003	5900
864	89	32	04.8	3.42	+0.12	+0.129		2004	5903
865	113	49	52.2	3.34	+0.02	—0.049			
866	126	58	44.4	3.25	—0.05	+0.314			
867	87	09	01.7	3.19	+0.06	+0.079		2008	5919
868	63	45	48.6	3.11	—0.07	—0.050			
869	77	19	04.1	2.83	+0.19	+0.076	+0.012		
870	128	56	22.0	2.49	+0.08	+0.039			
871	102	46	58.1	2.41	+0.02	—0.114			
872	21	45	49.7	2.39	—0.11	—0.418			
873	111	35	51.9	2.28	—0.07	+0.064			
874	85	21	37.4	2.13	—0.17	—0.090			
875	117	45	43.0	1.96	0.00	+0.089			
876	121	38	26.0	1.86	+0.07	+0.182		2042	6016
877	87	13	35.7	1.76	+0.07	—0.079			
878	62	10	52.0	1.73	+0.72	—0.009			
879	64	18	48.5	1.55	—0.21	+0.086			
880	114	50	57.6	+1.30	+0.17	—0.113			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
881		Serpentis		7	1842	2	17 47 06.917	+3.448	—0.006
882		Serpentis		6	1840	5	17 48 20.794	3.165	+0.007
*883		Sagittarii		5	1840	4	17 48 49.052	3.849	+0.003
884	89	Herculis		5.6	1840	4	17 48 58.003	2.417	+0.008
885	4	Sagittarii		5	1812	4	17 50 01.593	3.660	+0.001
886	64	Ophiuchi	ν	4	1840	5	17 50 13.503	3.300	+0.004
887	32	Draconis	ξ	3.4	1841	2	17 50 45.934	1.022	+0.014
888	92	Herculis	ξ	4	1840	3	17 51 32.980	2.322	+0.010
889	57	Serpentis	ζ	5	1840	3	17 52 01.870	3.156	+0.013
890	94	Herculis	ν	5	1840	1	17 52 22.614	2.293	+0.003
891	67	Ophiuchi		4	1840	2	17 52 37.952	3.002	+0.008
892	93	Herculis		5	1841.5	2	17 52 56.012	2.668	—0.001
*893	69	Ophiuchi	τ	5	1841.5	3	17 54 22.276	3.263	+0.006
894	10	Sagittarii	γ^2	4	1840.5	14	17 55 31.938	+3.856	+0.002
895	35	Draconis		5	1841	1	17 56 38.355	—2.709	+0.008
*896	70	Ophiuchi		4.5	1841.5	7	17 57 22.215	+3.011	+0.017
897		Sagittarii		5	1840	7	17 57 57.181	3.798	—0.001
898	72	Ophiuchi		4	1840.5	5	17 59 45.760	2.846	—0.002
899	103	Herculis	ο	4	1840.7	8	18 01 18.148	2.337	+0.004
900	13	Sagittarii	μ	3.4	1840.5	23	18 04 11.777	3.586	+0.001
901		Sagittarii		5.6	1841	6	18 08 02.305	3.754	+0.005
*902		Sagittarii		7	1841	1	18 08 05.166	3.518	+0.005
903	19	Sagittarii	δ	3.4	1840.5	13	18 10 45.230	3.838	+0.004
*904		Sagittarii		6	1841.5	3	18 10 56.032	3.451	+0.007
905	105	Herculis		5	1841.5	2	18 12 35.904	2.466	+0.005
906	20	Sagittarii	ε	3	1841	3	18 13 33.145	3.986	+0.001
907		Herculis		6	1840	3	18 14 11.693	2.333	+0.002
908		Sagittarii		6	1841	3	18 14 44.447	3.867	—0.004
*909	107	Herculis	t	5.6	1840.3	7	18 14 46.739	2.337	+0.002
910		Herculis		5.6	1841	1	18 15 28.472	2.499	.....
911	22	Sagittarii	λ	4	1840.5	17	18 18 05.796	3.706	+0.001
*912	59	Serpentis	d	6	1840.3	4	18 19 01.326	3.068	+0.004
913	39	Draconis	b	5	1842	1	18 21 34.668	0.880	—0.004
914		Sagittarii		6	1840	6	18 22 03.709	3.516	—0.007
915		Herculis		6	1840	2	18 22 57.985	+2.485	+0.015
916	23	Ursæ Minoris	δ	3	1841.5	15	18 23 55.346	—19.261	+0.030
917		Herculis		6	1840	1	18 26 06.749	+2.493	+0.005
*918		Aquilæ		6	1840	4	18 26 08.790	3.331	+0.003
919	1	Aquilæ		5	1841	4	18 26 30.010	3.265	0.000
*920		Sagittarii		6.7	1841	1	18 28 19.672	+3.485	.....

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						A. S. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
881	105	46	41.6	+1.13	+0.19	—0.003		2050	6065
882	94	03	08.5	1.02	+0.07	—0.276		2051	6071
883	120	13	45.5	0.98	+0.08	+0.152		2052	6074
884	63	55	10.2	0.97	—0.04	—0.367			
885	114	47	36.7	0.87	+0.01	+0.083			
886	99	44	51.2	0.86	+0.10	+0.273			
887	33	06	01.4	0.80	—0.06	+0.044			
888	60	43	49.2	0.74	+0.02	+0.060			
889	93	40	24.0	0.70	+0.03	—0.210			
890	59	47	38.4	0.66	0.00	—0.386			
891	87	03	18.0	0.64	+0.03	—0.298			
892	73	14	08.4	0.62	—0.07	+0.052			
893	98	10	23.4	0.50	—0.02	—0.044			
894	120	25	06.4	0.40	+0.23	—0.052			
895	13	01	14.3	0.30	—0.26	+1.435		2084	6114
896	87	27	23.7	0.23	+1.09	—0.005			
897	118	28	00.3	0.18	+0.11	+0.161		2085	6127
898	89	27	12.6	+0.03	—0.08	—0.120			
899	61	15	17.5	—0.12	—0.02	—0.112			
900	111	05	38.6	0.37	—0.01	+0.027	+0.057		
901	117	05	36.6	0.71	+0.06	—0.095		2103	6194
902	108	30	44.6	0.71	0.00	—0.374		2104	6195
903	119	53	21.9	0.94	+0.06	+0.180			
904	105	53	27.6	0.96	....	—0.148		2106	6210
905	65	36	57.4	1.11	0.00	+0.154			
906	124	27	07.8	1.18	+0.08	—0.025			
907	61	05	00.0	1.25	—0.02	—0.057			6234
908	120	49	51.5	1.29	+0.15	—0.073		2114	6239
909	61	12	05.7	1.30	—0.06	+0.139			
910	66	47	27.4	1.35	—0.08	+0.012		2117	6241
911	115	30	12.1	1.59	+0.23	—0.014			
912	89	53	40.6	1.67	+0.05	—0.224			
913	31	17	26.2	1.89	—0.04	+0.238			
914	108	30	20.2	1.93	+0.09	—0.021		2132	6294
915	66	14	07.4	2.00	0.00	+0.175		2134	6300
916	3	24	29.6	2.09	—0.02	—0.864	—1.109		
917	66	29	52.1	2.28	0.00	—0.111		2146	6322
918	101	05	43.8	2.28	+0.02	—0.060		2145	6324
919	98	20	56.8	2.31	+0.29	—0.030			
920	107	2–		—2.42	....	.....			

CATALOGUE OF 1248 STARS

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	*s.*	*s.*
921		Sagittarii		6	1841	1	18 28 46.752	+3.651	+0.003
922		Sagittarii		7	1842	2	18 29 20.970	3.584	+0.004
923	26	Sagittarii		6	1840.5	10	18 32 06.026	3.659	+0.007
*924		Sagittarii		7	1841	1	18 32 35 603	3.418	+0.006
925		Coronæ Aust.	λ	6	1839	1	18 32 48.262	4.122	+0.003
926	2	Aquilæ		5.6	1841.5	3	18 33 30.772	3.285	+0.004
927	27	Sagittarii	φ	4.5	1840	14	18 35 39.524	3.748	+0.011
928	28	Sagittarii		6	1840.5	4	18 36 41.557	3.618	+0.006
929	4	Aquilæ		5.6	1841	4	18 36 45.438	3.027	+0.005
930	46	Draconis	c	5	1841	1	18 39 31.794	1.162	—0.002
931	111	Herculis		5.6	1840.5	3	18 39 57.794	2.642	+0.010
932	29	Sagittarii		6	1840.5	5	18 40 10.377	3.562	+0.003
933	30	Sagittarii		6.7	1841	5	18 41 13.387	3.612	+0.001
934	32	Sagittarii	ν^1	5.6	1840	3	18 44 30.290	3.626	+0.002
935	34	Sagittarii	σ	3	1840.5	20	18 45 20.561	3.724	+0.006
936	35	Sagittarii	ν^2	5	1840	1	18 45 26.738	3.624	+0.009
937		Sagittarii		5	1840	1	18 45 30.737	3.624	.....
938	63	Serpentis	θ	4.5	1840	5	18 48 15.963	2.979	+0.003
939		Serpentis		5	1840	3	18 48 17.586	2.979	+0.003
940	9	Aquilæ		5.6	1840	3	18 48 29.657	3.209	+0.010
941	47	Draconis	o	5	1841	1	18 48 50.878	0.879	+0.008
942	64	Serpentis		6	1841	5	18 49 13.868	3.017	+0.003
943		Sagittarii		6.7	1840	2	18 51 58.924	3.622	—0.009
944	13	Aquilæ	ε	3.4	1841	5	18 52 21.827	2.725	—0.002
945	38	Sagittarii	ζ	4	1840	4	18 52 25.765	3.826	+0.003
946	12	Aquilæ		5.6	1840.5	7	18 53 08.174	3.206	+0.001
947	48	Draconis		5	1841.5	3	18 54 02.720	1.022	—0.003
948	39	Sagittarii	σ	4.5	1841	8	18 55 05.637	3.596	+0.006
*949		Aquilæ		...	1840	2	18 56 29.734	3.167	+0.003
950	15	Aquilæ	h	6	1840	3	18 56 30.730	3.167	+0.005
951	40	Sagittarii	τ	4	1840	8	18 56 56.945	3.757	—0.001
952	17	Aquilæ	ζ	3	1841	15	18 58 03.366	2.757	—0.002
953	41	Sagittarii	π	4.5	1840.5	16	19 00 14.780	3.574	+0.002
954	19	Aquilæ		6	1840.5	6	19 01 69.679	2.939	+0.002
955		Sagittarii		7.8	1841	1	19 02 48.948	3.412	+0.003
956		Sagittarii		6.7	1840	4	19 02 54.280	3.589	—0.007
*957	20	Aquilæ		5.6	1841	11	19 03 59.836	3.255	+0.005
958	42	Sagittarii	ψ	6	1840.5	6	19 05 43.628	3.683	+0.005
959	43	Sagittarii	d	5	1841	14	19 08 16.318	3.517	+0.003
*960		Vulpeculæ		6	1840.5	7	19 08 23.905	+2.591	+0.003

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
921	113	37	59.1	—2.51	—0.03	+0.072		2152	6343
922	111	10	38.0	2.56	+0.34	+0.020		2154	6347
923	113	58	30.9	2.80	+0.01	—0.064			
924	104	42	34.8	2.84	+0.22	—0.107		2159	6358
925	128	28	08.3	2.86	+0.09	—0.049			
926	99	11	57.0	2.92	0.00	—0.028			
927	117	08	53.4	3.11	+0.03	—0.046			
928	112	33	07.8	3.20	—0.01	—0.133			
929	88	05	46.3	3.21	—0.02	—0.052			
930	34	37	15.1	3.44	0.00	—0.116			
931	71	59	30.0	3.48	—0.12	+0.244			
932	110	30	01.7	3.50	0.00	+0.037			
933	112	20	18.6	3.59	+0.03	+0.027			
934	112	56	02.9	3.87	—0.01	—0.210			
935	116	29	17.9	3.95	+0.08	—0.029			
936	112	51	48.9	3.95	—0.02	+0.158			
937	112	51		3.96	....	.....			
938	85	59	56.0	4.20	—0.10	+0.003			
939	86	00	00.2	4.20	—0.12	+0.256		2189	6462
940	96	02	52.2	4.22	+0.02	+0.027			
941	30	48	20.8	4.24	0.00	+0.748			
942	87	40	07.4	4.28	—0.01	+0.128			
943	112	54	46.3	4.51	+0.01	+0.074		2195	6485
944	75	08	39.1	4.54	+0.10	+0.047			
945	120	06	06.7	4.55	+0.03	—0.095			
946	95	47	29.8	4.60	+0.04	—0.046			
947	32	23	43.6	4.69	+0.07	+0.240			
948	111	58	07.6	4.78	+0.03	+0.167			
949	94	16	22.3	4.90	....	+0.044			6517
950	94	15	47.5	4.90	—0.02	—0.100			
951	117	53	47.5	4.94	+0.23	+0.045			
952	76	22	09.2	5.03	+0.06	+0.074	—0.019		
953	111	16	15.1	5.21	—0.01	+0.060			
954	84	10	21.2	5.29	+0.04	—0.201			
955	104	50	38.6	5.43	+0.07	—0.022		2223	6560
956	111	54	59.4	5.44	+0.04	+0.140		2224	6561
957	98	12	02.0	5.53	—0.02	—0.194			
958	115	31	31.0	5.68	—0 01	+0.058			
959	109	13	50.5	5.89	—0.04	+0.038			
960	69	02	33.2	—5.89	—0.04	+0.275		2231	6582

CATALOGUE OF 1248 STARS

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession	Proper motion.
							h.	m.	s.	s.	s.
961	1	Vulpeculæ		5	1841	1	19	09	20.418	+2.578	+0.003
962	25	Aquilæ	ω	5.6	1840	4	19	10	18.335	2.815	+0.003
963		Sagittarii	β^2	4	1840	2	19	11	38.883	4.347	—0.014
964	26	Aquilæ	f	6	1840	5	19	12	00.267	3.197	+0.010
965	44	Sagittarii	ρ^1	5	1842	2	19	12	23.384	3.487	+0.003
966	57	Draconis	δ	3	1841	4	19	12	29.708	0.022	+0.022
967	46	Sagittarii	υ	5.6	1841	5	19	12	33.627	3.441	+0.006
968		Sagittarii	α	4.5	1840	2	19	12	46.977	4.171	+0.010
969		Sagittarii		6	1840	2	19	14	31.865	3.749	+0.005
970	47	Sagittarii	χ^1	6	1840	5	19	15	32.070	3.656	+0.004
971	49	Sagittarii	χ^3	6	1840	3	19	15	48.553	3.641	+0.002
972	30	Aquilæ	δ	3.4	1840.5	33	19	17	25.832	3.009	+0.018
973		Aquilæ		6	1840	3	19	20	18.633	3.009	.....
974	35	Aquilæ	c	6	1840.5	5	19	20	55.478	3.035	+0.002
975		Sagittarii		6	1840.5	4	19	21	24.035	3.568	—0.009
976	6	Vulpeculæ	α	4	1840.5	15	19	22	02.934	2.504	—0.009
977	8	Vulpeculæ		6	1840	3	19	22	16.620	2.502	+0.001
978	36	Aquilæ	e	6	1841	2	19	22	17.795	3.138	+0.007
979	6	Cygni	β	3	1840.5	13	19	24	16.105	2.418	+0.002
*980		Cygni		4.5	1840	2	19	24	18.543	2.417	+0.003
981		Vulpeculæ		6.7	1840.5	2	19	25	05.164	2.602	+0.002
982	51	Sagittarii	h^1	6	1840	3	19	26	18.523	3.652	+0.004
*983	52	Sagittarii	h^2	4.5	1840.5	21	19	26	57.926	3.656	+0.008
984	9	Vulpeculæ		5.6	1841	1	19	27	33.176	2.633	+0.001
985	39	Aquilæ	κ	4.5	1841	3	19	28	16.872	3.231	+0.003
986	42	Aquilæ		6	1841	1	19	29	17.877	3.179	+0.010
987	4	Sagittæ	ε	6	1840	3	19	30	02.773	2.714	+0.004
*988	44	Aquilæ	σ	5.6	1841	9	19	31	17.770	2.962	+0.003
989	54	Sagittarii	e^1	5.6	1841	2	19	31	33.405	3.439	+0 007
990	45	Aquilæ		6	1840	3	19	32	28.790	3.091	+0.004
991	5	Sagittæ	α	4	1840.5	3	19	32	56.536	2.680	+0.005
992	12	Cygni	φ	4	1839.5	9	19	33	03.571	2.367	+0.001
993	6	Sagittæ	β	5	1841	6	19	33	51.750	2.693	+0.004
994		Sagittarii		6	1841	5	19	34	25.709	3.418	+0.003
995	47	Aquilæ	χ	6	1841	3	19	35	02.424	2.822	+0 004
996	50	Aquilæ	γ	3	1840.5	38	19	38	39.148	2.851	+0.006
997	57	Sagittarii		6	1840.5	8	19	42	53.803	3.496	+0.003
998	53	Aquilæ	α	1.2	1840.5	33	19	42	58.528	2.891	+0.034
999	59	Sagittarii	b	5	1839	1	19	47	07.513	3.694	+0.003
*1000	60	Aquilæ	β	3.4	1840.5	42	19	47	27.216	+2.945	+0.007

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
961	68	53	12.4	—5.97	—0.06	+0.048			
962	78	41	14.5	6.06	—0.06	—0.185			
963	135	05	36.6	6.17	+0.20	+0.283			
964	95	42	34.9	6.20	—0.03	—0.053			
965	108	03	29.0	6.23	—0.06	—0.066			
966	22	37	11.9	6.24	—0.07	+0.372			
967	106	14	57.9	6.24	+0.04	—0.303			
968	130	54	34.7	6.26	+0.26	—0.553			
969	118	10	04.2	6.41	—0.01	—0.095		2265	6628
970	114	48	48.2	6.49	+0.08	+0.110			
971	114	16	08.5	6.51	—0.04	+0.263			
972	87	11	57.4	6.65	—0.11	+0.182	+0.035		
973	87	11		6.65	....	.....			
974	88	22	12.7	6.94	—0.02	—0.162			
975	111	38	17.3	6.97	+0.10	+0.165		2276	6671
976	65	39	16.6	7.03	+0.09	+0.004			
977	65	33	26.0	7.05	+0.10	+0.220			
978	93	06	57.7	7.05	—0.06	+0 015			
979	62	22	18.8	7.21	—0.02	—0.095			
980	62	21	59.0	7.22	—0.04	+0 093			6691
981	69	24	23.5	7.27	+0.07	+0.064		2283	6695
982	115	03	50.5	7.38	+0.02	+0.143			
983	115	13	49.6	7.43	0.00	+0.006			
984	70	34	17.6	7.47	—0.03	—0.094			
985	97	22	38.8	7.54	—0.02	—0.038			
986	95	00	00.0	7.62	+0.09	—0.133			
987	73	53	28.9	7.68	—0.06	+0.003			
988	84	57	42.3	7.78	—0.01	—0.130			
989	106	39	13.4	7.80	0.00	+0.225			
990	90	59	11.0	7.88	—0.02	0.000			
991	72	20	56.2	7.91	—0.03	—0.224			
992	60	12	42.3	7.92	—0.06	+0.091			
993	72	53	21.4	7.98	—0.02	—0.100			
994	105	50	07.4	8.03	+0.27	+0.119		2310	6746
995	78	32	40.2	8.08	—0.07	—0.026			
996	79	46	18.9	8.37	—0.01	+0.038	+0.016		
997	109	26	44.3	8.70	+0.06	+0.013			
998	81	33	01.8	8.71	—0.38	—0.052	+0.027		
999	117	35	14.2	9.03	—0.01	+0.233			
1000	83	59	17.3	—9.06	+0.54	+0.096	—0.002		

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
1001	11	Sagittæ		6	1840	3	19 50 29.627	+2.723	+0.003
1002	12	Sagittæ	γ	4.5	1841	6	19 51 38.560	2.662	+0.007
1003		Sagittarii		6	1841	1	19 51 52.900	3.576	+0.003
1004	62	Sagittarii	c	4.5	1840	18	19 52 48.726	3.701	+0.006
1005	15	Vulpeculæ		5	1841	5	19 54 30.790	2.464	+0.005
1006		Vulpeculæ		6	1840.5	4	19 51 58.060	2.540	+0.003
1007	16	Vulpeculæ		5	1840	4	19 55 14.662	2.537	+0.008
1008	62	Aquilæ		6	1841	2	19 56 08.566	3.095	+0.001
1009	14	Sagittæ		6	1841	2	19 56 10.739	2.744	+0.003
1010	63	Aquilæ	τ	5.6	1840	2	19 56 19.363	2.930	+0.007
1011	65	Sagittarii		6.7	1840	2	19 56 32.327	3.343	0.000
1012	16	Sagittæ	η	6	1842	1	19 58 03.942	2.658	+0.004
1013		Capricorni		7	1841	1	19 59 27.145	3.392	—0.001
1014	64	Aquilæ		6	1841	3	19 59 46.055	3.094	+0.011
1015	17	Vulpeculæ		5.6	1840.5	8	20 00 00.931	2.575	+0.002
1016	67	Draconis		5	1842	1	20 02 05.776	0.302	+0.002
1017	66	Draconis		5	1841	1	20 02 59.365	0.952	+0.014
1018	65	Aquilæ	θ	3.4	1840.5	3	20 03 02.936	3.097	+0.007
1019	18	Vulpeculæ		6	1840.5	8	20 03 52.894	2.501	+0.003
1020	19	Vulpeculæ		6	1840	1	20 05 06.896	2.505	+0.003
1021	67	Aquilæ	ρ	5	1842	1	20 06 52.314	2.772	+0.007
1022	5	Capricorni	α^1	4	1840	3	20 08 46.290	3.332	+0.003
1023	6	Capricorni	α^2	3	1840.5	19	20 09 10.320	3.332	+0.003
1024	7	Capricorni	σ	5.6	1839	1	20 10 09.516	3.472	+0.006
1025	9	Capricorni	β	3.4	1840.5	12	20 12 01.020	+3.377	+0.004
*1026	1	Cephei	κ	4.5	1841.5	9	20 14 09.149	—1.879	0.000
1027	25	Vulpeculæ		6	1840	3	20 15 10.660	+2.577	+0.002
1028	10	Capricorni	π	5	1840	14	20 18 09.349	3.444	+0.003
1029		Capricorni		6	1840	3	20 20 07.520	+3.534	—0.001
*1030		Ursæ Minoris		5	1841.5	9	20 21 37.735	—54.608	—0.042
1031	41	Cygni		4.5	1840	9	20 22 51.750	+2.448	+0.002
1032		Capricorni		6	1841	1	20 23 38.101	3.269	+0.001
1033		Capricorni		7	1841	2	20 25 16.879	3.344	—0.003
1034	2	Delphini	ε	4	1840.5	4	20 25 34.099	2.866	+0.002
1035	3	Delphini	η	6	1840.5	9	20 26 22.959	2.833	+0.007
1036	2	Cephei	θ	4.5	1841	1	20 26 53.026	1.012	+0.006
1037	4	Delphini	ζ	5	1841	2	20 27 49.603	2.802	+0.005
1038	13	Capricorni	τ^1	6.7	1841	4	20 28 22.390	3.370	+0.005
1039	70	Aquilæ		5.6	1841	1	20 28 23.662	3.129	+0.006
1040	6	Delphini	β	4	1839.5	5	20 30 02.750	+2.805	+0.008

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1001	73	38	08.8	−9.29	−0.11	+0.017			
1002	70	56	15.7	9.39	−0.08	−0.030			
1003	113	10	13.7	9.40	+0.06	+0.050		2349	6864
1004	118	08	52.6	9.48	−0.05	+0.086			
1005	42	41	02.9	9.61	−0.08	0.000			
1006	65	38	21.1	9.65	−0.04	+0.020		2358	6882
1007	65	30	21.1	9.67	−0.09	+0.482			
1008	91	09	00.6	9.73	+0.09	+0.046			
1009	74	24	47.1	9.74	−0.04	−0.101			
1010	83	10	05.0	9.75	−0.06	−0.037			
1011	103	06	39.9	9.77	−0.03	+0.157			
1012	70	27	48.6	9.88	−0.10	+0.232			
1013	105	29	08.0	9.99	+0.27	−0.015		2367	6907
1014	91	08	00.9	10.01	+0.07	+0.025			
1015	66	50	32.8	10.03	−0.02	+0.201			
1016	22	34	56.8	10.19	−0.04	+1.316			
1017	28	28	03.5	10.26	−0.05	−0.115			
1018	91	17	27.7	10.26	−0.02	+0.036			
1019	63	33	53.7	10.32	−0.09	+0.004			
1020	63	39	46.8	10.41	−0.05	+0.146			
1021	75	17	08.2	10.55	−0.08	−0.146			
1022	102	59	49.8	10.69	−0.02	−0.210			
1023	103	02	08.7	10.72	−0.03	+0.070	+0.025		
1024	109	36	43.7	10.78	−0.03	+0.116			
1025	105	16	53.0	10.93	−0.04	+0.040			
1026	12	46	24.7	11.08	−0.01	−0.151			
1027	66	03	35.7	11.16	−0.04	−0.120			
1028	108	43	49.4	11.37	−0.05	−0.059			
1029	112	54	58.4	11.51	+0.04	+0.010		2406	7049
1030	1	10	18.2	11.65	−0.02	−0.475	−0.541		6999
1031	60	09	43.2	11.71	−0.01	+0.260			
1032	100	23	40.5	11.76	−0.02	−0.021		2413	7080
1033	104	15	57.3	11.88	0.00	−0.151		2414	7087
1034	79	14	09.3	11.90	0.00	−0.051			
1035	77	30	57.1	11.96	−0.08	−0.011			
1036	27	32	32.1	11.99	+0.01	−0.144			
1037	75	52	24.8	12.06	−0.04	−0.117			
1038	105	41	47.3	12.10	−0.01	−0.060			
1039	93	05	54.4	12.09	−0.08	−0.048			
1040	75	57	24.7	−12.21	+0.01	−0.010			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
1041	71	Aquilæ		5	1840	1	20 30 04.335	+3.102	+0.003
1042	15	Capricorni	υ	5	1840.5	14	20 30 56.102	3.428	—0.001
1043		Capricorni		5.6	1841	1	20 31 32.372	3.387	—0.007
1044	9	Delphini	α	3.4	1840	1	20 32 12.419	2.781	+0.010
1045	10	Delphini		6	1840.5	2	20 33 46.819	2.809	+0.003
1046	11	Delphini	δ	5	1840.5	11	20 35 59.373	2.802	+0.002
1047	16	Capricorni	ψ	4.5	1840	9	20 36 36.644	3.573	—0.001
1048	30	Vulpeculæ		5.6	1840.5	3	20 37 57.057	2.596	0.000
1049	2	Aquarii	ε	4.5	1840.5	4	20 39 00.371	3.253	+0.007
1050	13	Delphini		5.6	1840.5	4	20 39 52.777	2.973	+0.007
1051		Microscopii	α	4.5	1840	7	20 39 57.722	3.772	+0.021
1052		Cephei		5	1841	2	20 41 22.837	1.501	—0.005
1053	3	Cephei	η	3.4	1841	1	20 42 02.254	1.218	+0.013
1054	5	Aquarii		6	1840	2	20 43 40.866	3.179	+0.002
1055	6	Aquarii	μ	4.5	1840	7	20 44 01.136	3.241	+0.006
1056	31	Vulpeculæ		5.6	1841	1	20 45 16.635	2.570	—0.004
1057	19	Capricorni		6	1841	4	20 45 44.899	3.406	0.000
*1058	32	Vulpeculæ		5	1839.5	7	20 47 44.621	2.554	+0.003
1059	16	Delphini		6	1841	2	20 48 00.539	2.860	+0.008
1060	17	Delphini		6	1841	1	20 48 02.162	2.839	+0.005
1061		Capricorni		6.7	1841	4	20 48 42.654	3.366	0.000
1062		Equulei		7	1841	1	20 49 47.506	3.009	+0.007
*1063	1	Equulei		5.6	1840.5	3	20 51 04.645	3.008	—0.006
1064	33	Vulpeculæ		5.6	1840	3	20 51 07.050	2.680	+0.008
*1065	1	Piscis Aust.		5.6	1839	2	20 51 28.121	3.703	+0.003
1066	21	Capricorni		6	1840.5	2	20 51 51.024	3.391	0.000
1067		Cephei		5	1841	5	20 52 00.433	1.605	.....
1068	11	Aquarii		6	1841	1	20 52 07.995	3.162	+0.005
1069		Capricorni		6.7	1841	1	20 52 14.455	+3.579	+0.012
1070	76	Draconis		5	1842	1	20 53 44.380	—3.779	—0.002
*1071	2	Equulei		6.7	1841	2	20 54 19.094	+2.959	+0.002
*1072	22	Capricorni	η	5	1839.5	9	20 55 17.431	3.431	+0.001
1073	3	Equulei		6	1840.5	3	20 56 36.458	2.988	+0.006
1074	23	Capricorni	θ	5.6	1840	5	20 56 56.673	3.379	+0.009
1075	4	Equulei		6	1841	4	20 57 30.922	2.981	—0.008
1076	25	Capricorni	χ	5.6	1840.5	3	20 59 22.970	3.451	+0.004
1077	27	Capricorni		7	1841	1	21 00 23.706	3.437	+0.012
1078	13	Aquarii	ν	5	1840	12	21 00 52.401	3.271	+0.006
1079	5	Equulei	γ	5	1840.5	4	21 02 33.659	2.914	+0.009
*1080	6	Equulei		6	1841	1	21 02 44.995	+2.916	+0.002

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1041	91	39	32.8	—12.19	—0.02	—0.065			
1042	108	41	46.1	12.27	—0.05	—0.028			
1043	106	41	17.1	12.31	0.00	—0.228		2437	7145
1044	74	38	54.3	12.36	—0.02	+0.019			
1045	75	58	54.6	12.47	—0.03	+0.029			
1046	75	29	43.2	12.62	+0.02	—0.107			
1047	115	50	29.6	12.66	+0.15	—0.136			
1048	65	17	57.4	12.75	+0.17	—0.133			
1049	100	04	38.2	12.82	+0.02	—0.409			
1050	84	34	34.0	12.89	+0.01	—0.193			
1051	124	22	00.6	12.89	+0.15	+0.042			
1052	32	59	30.5	12.98	+0.19	+0.127		2459	7215
1053	28	46	35.0	13.03	—0.82	+0.874			
1054	96	06	08.7	13.14	—0.02	—0.024			
1055	99	34	46.6	13.16	+0.03	—0.114			
1056	63	29	51.2	13.24	+0.01	—0.265			
1057	108	31	25.7	13.27	—0.04	—0.101			
1058	62	32	48.0	13.40	—0.04	—0.029			
1059	78	02	18.3	13.42	—0.05	—0.061			
1060	76	53	04.3	13.42	—0.04	—0.080			
1061	106	38	35.3	13.46	+0.05	—0.056		2482	7263
1062	86	25	03.6	13.54	+0.05	—0.294		2483	7269
1063	86	19	00.6	13.62	+0.14	+0.025			
1064	68	17	14.9	13.62	—0.08	—0.360			
1065	122	52	39.7	13.64	—0.01	+0.171			
1066	108	08	58.9	13.66	—0.03	+0.044			
1067	33	43	36.0	13.68	+0.03	+0.193		2493	7281
1068	95	20	45.1	13.68	+0.17	—0.115			
1069	117	30	05.4	13.69	+0.06	—0.335		2492	7287
1070	8	04	00.0	13.80	—0.03	—0.950			
1071	83	26	38.9	13.83	—0.03	—0.136			
1072	110	28	58.6	13.88	+0.02	—0.049			
1073	85	07	48.6	13.97	+0.05	—0.202			
1074	107	51	49.5	14.00	+0.03	—0.137			
1075	84	40	17.6	14.03	+0.14	+0.022			
1076	111	49	52.1	14.14	—0.02	—0.160			
1077	111	11	39.6	14.20	+0.09	+0.116			
1078	102	00	54.7	14.24	—0.01	+0.031			
1079	80	30	36.2	14.34	+0.17	—0.001			
1080	80	36	03.6	—14.35	+0.02	+0.165			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion
							h.	m.	s.	s.	s.
1081	3	Piscis Aust.		6	1840	1	21	03	47.401	+3.570	+0.009
1082	64	Cygni	ζ	3	1840	21	21	06	07.832	2.549	+0.001
*1083	29	Capricorni		5.6	1839	7	21	06	53.117	3.330	+0.005
1084	30	Capricorni		6	1840	1	21	08	58.255	3.377	+0.002
1085	31	Capricorni		8	1840.5	6	21	09	17.985	3.368	+0.005
*1086		Capricorni		7.8	1841	3	21	10	21.047	3.343	—0.003
1087	32	Capricorni	ι	4	1840	12	21	13	19.738	3.351	+0.007
1088	1	Pegasi		4	1839	1	21	14	41.448	2.764	+0.012
1089	5	Cephei	α	3	1839.5	10	21	14	45.176	1.417	+0.023
1090	18	Aquarii		6	1840	1	21	15	26.617	3.283	+0.009
1091	19	Aquarii		6	1841	4	21	16	36.775	3.231	+0.001
1092	21	Aquarii		5.6	1840.5	3	21	16	56.052	3.136	+0.001
1093	34	Capricorni	ζ	4	1839.5	5	21	17	31.390	3.442	+0.003
1094	35	Capricorni		6	1841	2	21	18	09.959	3.419	+0.002
1095	36	Capricorni	b	5.6	1840.5	7	21	19	35.389	3.428	+0.013
1096	22	Aquarii	β	3	1839.5	22	21	23	07.833	3.164	+0.005
*1097	8	Cephei	β	3	1840.3	18	21	26	34.265	0.809	+0.002
1098	8	Piscis Aust.		5.6	1840	2	21	26	53.616	3.490	+0.011
1099	39	Capricorni	ε	5	1839.5	7	21	28	06.825	3.373	+0.004
1100	5	Pegasi		6	1841	3	21	30	16.475	2.797	+0.011
1101	4	Pegasi		5.6	1841	1	21	30	31.125	2.998	+0.006
1102	40	Capriconi	γ	4	1840	15	21	31	13.123	3.323	+0.019
1103	25	Aquarii	d	5.6	1841	2	21	31	26.076	3.050	+0.002
1104	42	Capricorni		6	1840	1	21	32	50.609	3.281	—0.007
1105	41	Capricorni		5	1841	2	21	32	53.493	3.427	+0.010
1106	43	Capricorni	κ	5	1841	1	21	33	42.640	3.365	+0.011
1107	7	Pegasi		5.6	1840	1	21	34	14.943	3.001	+0.006
1108	9	Piscis Aust.	ι	4.5	1839	1	21	35	24.309	3.596	+0.005
1109	8	Pegasi	ε	2.3	1839.5	21	21	36	19.727	2.944	+0.007
*1110	49	Capricorni	δ	3.4	1839.5	15	21	38	12.072	3.305	+0.019
*1111	27	Aquarii		5.6	1840	1	21	39	06.942	3.045	+0.004
1112	11	Cephei		5	1841	1	21	39	31.568	0.890	+0.022
1113		Aquarii		7	1841	1	21	40	38.959	3.153	+0.003
1114	13	Pegasi		6	1841	1	21	42	32.141	2.846	+0.009
1115	14	Pegasi		5	1840	3	21	42	46.511	2.646	+0.002
1116		Gruis	γ	4	1839	2	21	44	13.425	3.656	+0.019
1117	51	Capricorni	μ	5	1840.5	13	21	44	33.922	3.260	+0.026
1118	15	Pegasi		5.6	1840	4	21	45	47.227	2.724	+0.006
1119		Aquarii		6.7	1841	1	21	45	48.712	3.136	+0.001
1120	17	Pegasi		6	1840.5	10	21	49	08.327	+2.926	+0.003

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1081	118	16	01.3	—14.41	+0.07	+0.211			
1082	60	25	34.8	14.55	+0.06	+0.062	0.000		
1083	105	49	54.6	14.60	—0.03	+0.007			
1084	108	38	58.6	14.73	—0.07	—0.165			
1085	108	07	39.6	14.75	—0.08	—0.065			
1086	106	50	53.6	14.81	+0.10	—0.175		2522	7396
1087	107	30	39.4	14.98	—0.06	—0.157			
1088	70	52	34.0	15.06	—0.09	+0.128			
1089	28	05	25.8	15.07	—0.01	—0.034	—0.085		
1090	103	23	33.6	15.11	—0.06	—0.003			
1091	100	25	36.0	15.17	+0.17	—0.035			
1092	94	14	19.0	15.19	+0.01	—0.058			
1093	113	05	58.4	15.23	—0.05	+0.080			
1094	117	53	01.2	15.26	—0.01	—0.091			
1095	112	29	55.2	15.34	—0.04	—0.101			
1096	96	16	17.3	15.54	—0.03	—0.017	—0.084		
1097	20	08	27.5	15.72	+0.04	+0.015	—0.078		
1098	116	52	53 9	15.75	+0.04	—0.124			
1099	110	11	42.7	15.81	—0.02	+0.005			
1100	71	23	48.6	15.93	—0.09	+0.045			
1101	84	56	50.1	15.94	—0.02	+0.075			
1102	107	22	51.6	15.98	—0.01	—0.047			
1103	88	28	18.0	15.93	+0.02	—0.141			
1104	104	45	30.5	16.06	+0.26	+0.109			
1105	113	58	57.4	16.06	+0.05	+0.053			
1106	109	35	29.4	16.11	—0.02	—0.300			
1107	85	02	49.5	16.13	+0.05	—0.277			
1108	123	45	08.9	16.20	+0.09	+0.209			
1109	80	51	19.8	16.24	—0.02	+0.117	+0.005		
1110	106	51	03.2	16.34	+0.25	—0.073			
1111	88	02	58.8	16.38	—0.08	—0.128		2589	7587
1112	19	25	28.9	16.40	—0.06	—1.527			
1113	96	08	33.5	16.46	+0.06	+0.199		2591	7596
1114	73	27	15.8	16.56	+0.01	+0.161			
1115	60	34	05.7	16.57	+0.01	+0.361			
1116	128	06	51.5	16.64	+0.12	+0.175			
1117	104	18	03.9	16.65	—0.04	—0.038			
1118	64	49	33.4	16.72	+0.02	—0.063			
1119	95	01	36.1	16.71	+0.29	+0.022		2602	7628
1120	78	40	45.9	—16.88	—0.04	—0.033			

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					h. m. s.	s.	s.
1121	Aquarii	7	1841	1	21 49 49.725	+3.149	+0.002
1122	12 Piscis Aust. η	6	1839	2	21 51 38.036	3.468	+0.003
1123	28 Aquarii	6	1841	1	21 52 53.736	3.073	+0.002
1124	19 Pegasi	6	1841	2	21 53 12.906	2.978	+0.001
1125	20 Pegasi	5.6	1840.5	4	21 53 17.735	2.917	+0.011
*1126	29 Aquarii	7.8	1840.5	3	21 53 40.627	3.295	+0.002
1127	30 Aquarii	6	1840	1	21 54 51.105	3.160	+0.008
1128	34 Aquarii α	3	1840.5	8	21 57 33.816	3.084	+0.002
1129	33 Aquarii ι	4.5	1839.5	11	21 57 47.346	3.248	+0.005
1130	36 Aquarii	7	1841	3	22 00 59.097	3.175	+0.008
*1131	37 Aquarii e^1	6.4	1840.5	6	22 01 59.317	3.206	+0.003
1132	26 Pegasi θ	4	1841	1	22 02 07.872	3.008	+0.025
*1133	Aquarii	5.6	1840.5	3	22 04 44.444	3.384	+0.017
1134	16 Piscis Aust. λ	6	1840.5	2	22 05 13.751	3.420	+0.007
1135	21 Cephei ζ	4	1841	2	22 05 18.958	2.069	+0.003
*1136	41 Aquarii	6	1840.5	3	22 05 27.188	3.328	+0.005
1137	43 Aquarii θ	4.5	1840	15	22 08 23.143	3.165	+0.011
1138	Aquarii	6	1839	1	22 08 25.265	3.179	—0.003
1139	45 Aquarii	6	1840	2	22 10 25.133	3.225	+0.009
1140	46 Aquarii ρ	6	1841	1	22 11 46.458	3.163	+0.003
1141	30 Pegasi	5	1840.5	6	22 12 24.514	3.018	+0.007
1142	47 Aquarii	5	1841	2	22 12 46.630	3.319	+0.002
1143	48 Aquarii γ	4	1840	4	22 13 23.513	3.094	+0.013
1144	32 Pegasi	5.6	1839	1	22 13 56.815	2.759	+0.003
1145	49 Aquarii	6	1840	2	22 14 35.228	3.355	+0.011
1146	Aquarii	6.7	1841	1	22 15 08.304	3.154	+0.010
1147	50 Aquarii	6	1840.5	3	22 15 52.398	3.220	+0.004
1148	Aquarii	7	1841	1	22 16 20.781	3.091	0.000
1149	52 Aquarii π	5	1840.5	7	22 17 06.267	3.064	+0.004
1150	34 Pegasi	5.6	1840.5	5	22 18 28.852	3.034	+0.021
1151	35 Pegasi	5.6	1841	1	22 19 45.670	3.032	+0.009
*1152	55 Aquarii ζ	4.5	1810.5	6	22 20 35.523	3.079	+0.014
1153	57 Aquarii σ	5	1840	9	22 22 10.491	3.183	+0.002
1154	17 Piscis Aust. β	4	1840	2	22 22 23.545	3.432	+0.008
1155	58 Aquarii	6.7	1841	1	22 23 11.979	3.184	+0.006
1156	27 Cephei δ	4.5	1841	1	22 23 14.198	2.208	+0.004
1157	39 Pegasi	6.7	1840.5	3	22 24 51.850	2.881	+0.015
1158	59 Aquarii υ	5.6	1840	4	22 25 55.935	3.281	+0.017
1159	Aquarii	7	1841	1	22 26 24.871	3.072	+0.003
1160	62 Aquarii η	4	1840	11	22 27 07.995	+3.080	+0.008

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						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1121	96	10	50.4	−16.94	+0.13	−0.265		2607	7650
1122	119	13	04.6	16.99	−0.03	+0.166			
1123	90	09	43.6	17.05	+0.05	+0.066			
1124	82	30	31.0	17.07	−0.01	+0.136			
1125	77	38	33.9	17.07	0.00	−0.256			
1126	107	43	53.2	17.08	−0.08	−0.053			
1127	97	17	32.4	17.14	−0.02	−0.205			
1128	91	05	40.1	17.26	−0.01	+0.006	−0.040		
1129	104	38	36.4	17.28	+0.05	−0.064			
1130	98	58	10.3	17.41	+0.02	+0.067			
1131	101	36	17.5	17.46	−0.05	+0.017			
1132	84	35	11.2	17.46	−0.05	−0.192			
1133	115	58	19.5	17.58	+0.12	−0.006		2642	7745
1134	118	33	02.7	17.60	−0.82	−0.699			
1135	32	35	09.4	17.60	+0.01	+0.378			
1136	111	51	59.1	17.61	−0.09	−0.102			
1137	98	31	37.8	17.73	0.00	−0.067			
1138	99	50	06.6	17.73	+0.02	−0.205		2656	7774
1139	104	06	08.0	17.81	−0.05	−0.097			
1140	98	37	17.0	17.86	−0.05	−0.112			
1141	85	00	47.7	17.89	+0.03	−0.026			
1142	112	23	49.0	17.90	+0.03	−0.100			
1143	98	11	27.7	17.93	−0.04	+0.053			
1144	62	28	20.5	17.94	−0.04	+0.345			
1145	115	34	10.8	17.97	+0.01	+0.026			
1146	98	00	00.7	17.99	−0.03	−0.096		2669	7804
1147	104	20	15.4	18.02	−0.04	−0.002			
1148	91	59	49.8	18.04	+0.04	+0.361		2673	7809
1149	89	25	55.3	18.07	−0.01	−0.143			
1150	86	25	10.6	18.12	−0.05	+0.202			
1151	86	06	20.6	18.17	+0.29	−0.060			
1152	90	50	09.9	18.20	−0.05	+0.013			
1153	101	29	37.1	18.26	−0.08	−0.039			
1154	123	09	50.8	18.26	+0.02	−0.135			
1155	101	43	21.2	18.29	−0.01	−0.121			
1156	32	24	08.4	18.30	+0.01	−0.272			
1157	70	35	32.7	18.35	−0.02	+0.020			
1158	111	31	31.4	18.39	+0.10	−0.005			
1159	90	13	42.3	18.40	+0.26	+0.061		2697	7865
1160	90	56	25.7	−18.43	+0.05	−0.045			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	m.	s.	s.	s.
1161	61	Aquarii		7	1841	1	22	27	11.764	+3.244	−0.001
1162	63	Aquarii	κ	6	1840.5	7	22	29	28.098	3.116	−0.001
1163	64	Aquarii		7	1841	2	22	30	50.549	3.168	+0.001
1164	18	Piscis Aust.	ε	4	1839	1	22	31	47.848	3.336	+0.004
1165	42	Pegasi	ζ	3	1840	22	22	33	29.025	2.984	+0.006
1166	44	Pegasi	η	3	1839.5	3	22	35	30.504	2.801	+0.005
1167	20	Piscis Aust.		6	1840.5	5	22	36	44.902	3.303	+0.004
1168	45	Pegasi		6	1840.5	8	22	37	41.479	2.914	+0.001
1169	46	Pegasi	ξ	4.5	1841	1	22	38	42.294	2.978	+0.015
1170	47	Pegasi	λ	4.5	1839.5	2	22	38	49.728	2.878	+0.006
1171	70	Aquarii		6	1840.5	3	22	40	04.626	3.163	+0.006
•1172	71	Aquarii	τ^2	5	1840.5	7	22	41	06.817	3.187	+0.001
1173	48	Pegasi	μ	4	1840	6	22	42	17.266	2.877	+0.012
1174	73	Aquarii	λ	4	1839.5	21	22	44	15.764	3.135	−0.001
1175	74	Aquarii		6	1841	1	22	45	02.982	3.166	+0.004
1176	24	Piscis Aust.	α	1	1839.5	32	22	48	47.743	3.311	+0.026
1177	2	Piscium		6	1841	2	22	51	15.214	3.070	+0.008
1178	3	Piscium		6	1840.5	12	22	52	25.522	3.075	+0.005
1179		Piscium		7	1841	2	22	52	33.787	3.056	+0.010
1180	81	Aquarii		6.7	1839	2	22	53	04.251	3.124	+0.002
1181	4	Piscium	β	5	1841	4	22	55	44.028	3.051	+0.006
1182	53	Pegasi	β	2	1839	1	22	56	02.051	2.883	+0.016
1183	54	Pegasi	α	2.3	1839.5	30	22	56	47.709	2.978	+0.007
1184	56	Pegasi		4.5	1841	3	22	59	19.668	2.910	+0.005
1185	5	Piscium	A	6	1840	3	23	00	29.233	3.063	+0.011
1186	88	Aquarii	c^2	4.5	1840	9	23	00	54.206	3.209	+0.005
1187	89	Aquarii	c^3	5	1839	1	23	01	21.747	3.217	+0.004
1188	57.	Pegasi		5.6	1841	1	23	01	26.924	3.024	+0.002
1189	33	Cephei	π	5	1841	1	23	02	49.601	1.879	+0.001
1190	59	Pegasi		5.6	1840.5	4	23	03	39.631	3.026	+0.003
1191	60	Pegasi		6	1840.5	7	23	04	03.780	2.913	−0.013
1192	90	Aquarii	φ	5	1840	9	23	06	01.917	3.109	+0.006
1193	61	Pegasi		6	1840	2	23	07	58.020	2.915	+0.003
1194	6	Piscium	γ	4.5	1840.5	8	23	08	52.246	3.058	+0.052
1195	93	Aquarii	ψ^2	5	1841	2	23	09	34.801	3.123	+0.006
1196		Sculptoris	γ	5	1840	1	23	10	10.379	3.260	+0.002
1197	96	Aquarii		6	1840	1	23	11	05.897	3.101	+0.016
1198	7	Piscium	b	6	1841	1	23	12	10.754	3.049	+0.006
•1199		Aquarii		6	1841	2	23	12	42.979	3.215	−0.002
1200	62	Pegasi	τ	5.6	1840	7	23	12	43.470	+2.955	+0.005

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1161	108	17	01.1	−18.43	+0.01	+0.304			
1162	95	03	04.2	18.51	+0.09	−0.052			
1163	100	51	27.9	18.55	−0.02	−0.101			
1164	117	52	33.6	18.59	+0.02	+0.128			
1165	80	00	07.3	18.64	−0.02	+0.024	+0.021		
1166	60	36	49.5	18.71	+0.01	−0.116			
1167	116	04	32.6	18.74	−0.10	−0.238			
1168	71	28	29.9	18.78	−0.10	−0.039			
1169	78	38	42.1	18.80	+0.43	+0.204			
1170	67	16	27.6	18.82	−0.02	−0.102			
1171	101	23	54.5	18.84	−0.04	−0.024			
1172	104	26	06.0	18.87	−0.01	−0.063			
1173	66	14	28.7	18.92	+0.02	+0.096			
1174	98	25	44.6	18.98	−0.06	−0.066			
1175	102	27	54.0	19.00	−0.03	+0.002			
1176	120	28	05.3	19.10	+0.15	+0.333	+0.134		
1177	89	58	27.6	19.16	+0.12	−0.276			
1178	90	40	18.5	19.19	−0.02	−0.048			
1179	87	50	29.1	19.20	+0.07	−0.043		2747	8014
1180	97	55	02.3	19.21	−0.06	−0.349			
1181	87	02	24.1	19.27	0.00	−0.172			
1182	62	47	01.0	19.28	−0.17	+0.651			
1183	75	39	15.8	19.30	−0.01	+0.059	−0.041		
1184	65	23	38.6	19.36	0.00	−0.022			
1185	88	44	28.6	19.38	−0.15	+0.003			
1186	112	02	20.9	19.39	−0.08	−0.234			
1187	113	19	21.7	19.40	−0.05	+0.097			
1188	82	11	20.5	19.41	−0.01	−0.126			
1189	15	28	37.8	19.43	+0.05	+0.161			
1190	82	08	51.6	19.45	−0.01	−0.049			
1191	64	00	54.1	19.46	+0.08	+0.080			
1192	96	54	36.1	19.50	+0.16	−0.193			
1193	62	37	21.5	19.54	−0.05	+0.060			
1194	87	35	23.9	19.56	−0.04	−0.044			
1195	100	03	19.7	19.57	+0.02	−0.449			
1196	123	24	09.8	19.58	+0.07	−0.021			
1197	95	59	50.0	19.60	−0.03	−0.258			
1198	85	29	28.6	19.62	+0.04	−0.786			
1199	117	51	38.7	19.63	+0.04	−0.431		2786	8132
1200	67	08	03.0	−19.63	−0.01	−0.080			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.			Annual precession.	Proper motion.
							h.	*m.*	*s.*	*s.*	*s.*
1201	98	Aquarii	b^1	5	1840	2	23	14	33.547	+3.171	—0.007
1202	66	Pegasi		6	1841	1	23	15	00.449	3.018	+0.004
*1203		Aquarii		6.7	1841	3	23	15	37.639	3.178	+0.006
1204	68	Pegasi	υ	5	1840	3	23	17	24.147	2.968	+0.017
*1205	99	Aquarii	b^2	5	1841	1	23	17	37.048	3.167	—0.003
1206	8	Piscium	κ	5.6	1839.5	9	23	18	43.824	3.069	+0.010
1207	9	Piscium		5.6	1841	2	23	19	03.040	3.069	+0.003
1208		Cephei		5.6	1841	1	23	20	32 674	2.458	.....
1209	70	Pegasi	q	5	1840	2	23	21	03.857	3.023	+0.005
1210	12	Piscium		7	1841	1	23	21	17.989	3.078	0.000
1211		Cassiopeæ		5	1841	1	23	22	40.943	2.729	+0.015
1212	13	Piscium		7	1840.5	4	23	23	44.985	3.078	+0.003
1213	101	Aquarii	b^4	5	1840	7	23	24	53.616	3.152	+0.001
1214	71	Pegasi		5	1840.5	2	23	25	27.856	2.991	+0.007
1215		Aquarii		6.7	1841	1	23	27	16.422	3.099	—0.010
1216	15	Piscium		7	1841	1	23	27	17.953	3.069	—0.001
1217		Aquarii		6	1841	1	23	27	45.014	3.170	—0.002
1218	16	Piscium		6	1840.5	5	23	28	13.384	3.067	—0.003
1219	75	Pegasi		6	1839	1	23	29	52.237	3.015	+0.007
1220	17	Piscium	ι	4.5	1839.5	20	23	31	43.927	3.057	+0.055
1221	35	Cephei	γ	3	1840.3	18	23	32	50.783	2.400	—0.016
1222	18	Piscium	λ	5	1840	20	23	33	52.921	3.068	—0.004
1223	106	Aquarii	ι^1	5.6	1840	1	23	35	53.891	3.119	+0.005
1224	78	Pegasi		5.6	1839	1	23	35	57.011	2.995	+0.010
*1225	107	Aquarii	ι^2	6	1840	2	23	37	41.752	3.117	+0.008
1226	19	Piscium		6	1841	3	23	38	13.053	3.065	+0.002
1227		Aquarii		6	1841	2	23	39	01.228	3.099	—0.015
1228	20	Piscium		5.6	1839	8	23	39	42.900	3.078	+0.007
1229		Sculptoris	δ	5	1840	4	23	40	34.980	3.134	+0.009
1230	21	Piscium		6	1840	1	23	41	15.481	3.070	+0.003
1231	79	Pegasi		6	1840.5	4	23	41	34.312	3.014	+0.007
1232	108	Aquarii		6	1841	2	23	43	05.000	3.106	+0.002
1233	22	Piscium		6	1840	5	23	43	46.470	3.067	+0.004
1234		Aquarii		6	1841	2	23	44	16.409	3.096	—0.003
1235	81	Pegasi	ϕ	6	1839	3	23	44	21.117	3.040	0.000
1236	25	Piscium		6.7	1840.5	4	23	44	53.090	3.069	+0.001
1237	26	Piscium		6	1840.5	9	23	46	56.800	3.063	+0.005
1238	84	Pegasi	ψ	5.6	1840	7	23	49	36.915	3.044	+0.002
1239	27	Piscium		5	1840	1	23	50	28.953	3.075	—0.003
1240	28	Piscium	ω	4.5	1840	13	23	51	05.813	+3.065	+0.015

OBSERVED AT WASHINGTON.

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1201	101	58	21.2	−19.66	+0.07	−0.103			
1202	78	38	39.0	19.67	−0.03	−0.211			
1203	112	38	51.2	19.68	+0.03	−0.381		2793	8155
1204	67	28	31.0	19.71	−0.07	+0.037			
1205	111	31	03.1	19.71	+0.02	−0.482			
1206	89	37	10.2	19.73	+0.10	−0.076			
1207	89	45	22.6	19.73	+0.05	+0.020			
1208	20	31	12.4	19.76	0.00	−0.036		2802	8180
1209	78	07	15.5	19.76	−0.06	−0.103			
1210	91	54	56.3	19.77	+0.01	−0.021			
1211	32	19	57.6	19.79	−0.02	+0.793		2807	8188
1212	91	58	08.1	19.80	−0.03	−0.065			
1213	111	47	52.1	19.82	−0.04	−0.234			
1214	68	22	57.8	19.82	−0.02	+0.016			
1215	98	20	56.2	19.85	+0.04	−0.318		2814	8214
1216	89	34	14.6	19.85	+0.05	+0.033			
1217	117	45	36.9	19.85	+0.13	+0.234		2816	8216
1218	88	47	03.4	19.86	−0.10	−0.066			
1219	72	29	04.1	19.88	−0.07	−0.233			
1220	85	14	26.4	19.90	+0.44	+0.487	+0.062		
1221	13	15	39.2	19.92	−0.17	+0.453	+0.333		
1222	89	05	57.8	19.93	+0.13	−0.279			
1223	109	09	51.1	19.95	−0.03	−0.039			
1224	61	31	25.2	19.95	−0.01	−0.249			
1225	109	34	06.8	19.97	−0.03	−0.198			
1226	87	23	59.6	19.97	−0.02	−0.147			
1227	102	47	40.6	19.98	+0.09	−0.142		2839	8266
1228	93	39	01.8	19.98	−0.02	−0.100			
1229	119	00	52.1	19.99	+0.10	−0.120			
1230	89	48	47.1	19.99	+0.08	−0.549			
1231	62	02	52.2	19.99	−0.05	+0.192			
1232	109	48	19.3	20.00	+0.03	−0.220			
1233	87	57	29.5	20.01	−0.02	−0.120			
1234	105	08	31.9	20.01	+0.14	−0.111		2853	8297
1235	71	46	03.5	20.01	−0.01	−0.173			
1236	88	47	54.0	20.01	−0.02	−0.020			
1237	83	49	05.0	20.03	−0.02	−0.080			
1238	65	44	51.5	20.04	+0.01	−0.125			
1239	94	26	37.4	20.04	+0.12	+0.043			
1240	84	01	19.3	−20.04	+0.08	−0.087			

No.	Constellation.			Mag.	Mean year of observation.	No. of observations.	Right ascension, Jan. 1, 1840.	Annual precession.	Proper motion.
							h. m. s.	s.	s.
1241		Piscium		7	1841	1	23 51 27.982	+3.076	+0.023
*1242	29	Piscium		5.6	1839.5	8	23 53 37.300	3.073	+0.002
1243	30	Piscium		4.5	1841	1	23 53 45.285	3.075	+0.007
1244	31	Piscium	c^1	6.7	1841	1	23 54 12.702	3.066	—0.001
1245	32	Piscium	c^2	6	1840	3	23 54 19.260	3.067	—0.002
1246	2	Ceti		4	1840	7	23 55 32.276	3.079	+0.004
1247	33	Piscium		5	1840.5	5	23 57 08.607	3.072	+0.004
1248	86	Pegasi		6	1840	1	23 57 29.406	+3.067	+0.005

No.	North polar distance, Jan. 1, 1840.			Annual precession.	Proper motion.	Diff. in AR from the		Number in the	
						B. A. C.	N. A. 1840.	A. S. C.	B. A. C.
	°	′	″	″	″	s.	s.		
1241	96	46	53.2	—20.04	+0.09	—0.318		2866	8333
1242	93	55	04.6	20.05	—0.02	—0.180			
1243	96	54	12.0	20.05	+0.02	—0.005			
1244	81	56	01.7	20.05	+0.01	—0.018			
1245	82	24	11.0	20.05	+0.03	—0.040			
1246	108	13	35.5	20.05	—0.02	—0.094			
1247	96	36	09.5	20.05	—0.05	—0.173			
1248	77	29	37.8	—20.05	—0.04	—0.094			

No. 3. 35 Piscium is double; the smaller star estimated to be of the 7th magnitude, and distant 7½″. It is in Struve's *fifth* order. In his smaller catalogue, he states the lesser object of the 8th magnitude, but in the great work he says: "Major 6.2, minor 7.8 albæ;" and the mean of his distances is 11½″. Capt. Smyth ("*Cycle of Celestial Objects, Bedford Catalogue*") says: "A 6 pale white, B 8 violet tint."

No. 51. Recorded 40 *Ceti;* it was doubtless 39 Ceti, and is so designated.

No. 58. The magnitude of this star deserves attention.

No. 64. Probably variable.

No. 72. 1 Arietis is double. Two estimates of these stars differ a magnitude in the brighter object, but agree that the companion is of the 7th. Capt. Smyth coincides as to the brightness of the first, and makes the second of the 8th; their colors, topaz yellow and smalt blue, and distance 9″ nearly.

No. 73. Polar distance estimated, the star not being in either of the catalogues referred to in this volume.

No. 76. γ Arietis is double, each star of the 5th magnitude, and differing in declination about 10″. Struve has them: "Major 4.2, borealis minor 4.4 egregie albæ." Herschel and South (*Philosophical Transactions,* 1824) agree with me in the magnitudes, and say they are "both bluish." Capt. Smyth says: "A 4½ bright white, B 5 pale grey, and distance in 1837.9 = 8″.8."

No. 84. α Piscium is double, its companion distant about 4″ and of the 6.7 magnitude. Capt. Smyth makes it half a magnitude greater.

No. 93. Long recognised as a variable star; being at its maximum of the 2d magnitude, and decreasing to invisibility in 331½ days. As it was observed only in January, 1840, the observations afford but little information.

No. 96. χ Fornacis of the A. S. C.

No. 114. η Persei is double, the magnitudes estimated 4.5 and 9th. There appears doubt about these stars. Mr. Baily says: "In the British Catalogue it is stated to be of the 6th magnitude, but in Halley's edition it is called the 4th. On consulting *the original* entry in the MS. book, I find it is there also noted as the 4th, which I have here adopted." They are in Struve's 7th and 8th order, and he gives this account of them: "Major 4.0, egregie flava; minor 8.5, egregie cerulea; colores insignes." Herschel and South pronounce them "extremely unequal; large *red*, small dusky bluish; colors decided"—in which colors Capt. Smyth coincides. His magnitudes are 5 and 8½, and he adds: "It is certainly bright for Piazzi's rating, (5,) but I see no reason for altering it, since it is less lustrous than θ or γ Persei, its neighbors of the 4th magnitude." The distance of these stars is about 28″.

No. 118. υ Fornacis is of the 5th magnitude in the catalogue of the Astronomical Society, and of the 5½ in that of the British Association. The estimated magnitude is probably erroneous.

No. 125. E Eridani in the A. S. C.

No. 127. 53 Arietis is probably variable from the 6th to the 7th magnitude. See observations of it in 1840—January 13, August 18, September 15, October 12 and 13, November 9; and in 1841—January 3, October 3, November 27.

No. 152. τ Fornacis in the A. S. C.

No. 160. There are seven observations of this as a double star; six of which coincide in the magnitude of the brighter object, four assign 6th to the smaller, two 7th, and on one occasion it was not noted. It is too far south to have been observed by either of the distinguished astrometers mentioned, unless by Sir John Herschel, during his residence at the Cape of Good Hope.

No. 164. 32 Eridani is double. Four out of five observations state the primary to be of the 5th magnitude, three class the companion with those of the 6.7, and two with those of the 7th. Struve says: "Major 4.0, flavæ; minor 6.0, cærulea; colores insignes." Herschel and South coincide in the shades of color, but Capt. Smyth differs somewhat. He says: "A 5 topaz yellow, B 7 sea green, the colors in brilliant contrast." The distance of these stars is about 7″.

No. 173. For two of the observations of 39 Tauri, see foot notes to page 61.

No. 195. A single observation of 59 Tauri as a double star states the magnitudes 6th and 9th, respectively; the lesser object being one magnitude smaller than Capt. Smyth's They are in Struve's 7th order, and about 19″ distant. Of the magnitudes and colors he says: "Major 5.7, alba; minor 7.8, albasubcærulea." The magnitudes of Herschel and South are "5 and 8½ or 9."

No. 222. I have no doubt of the variability of this star; the magnitudes being from 4 to 5 in less than sixty days. See observations, 1839—October 25, November 21, December 19; 1840—January 15, February 28.

No. 243. λ Eridani is registered on the 21st November, 1839, as of the 4.5 magnitude. On the 15th January following, it was only of the 6th; twenty days after, it had increased to the 5th; and eight days after that, to the 4th. It certainly deserves attention.

No. 254. λ Leporis is noted double on one occasion. I do not find it in either of the lists as such.

No. 259. β Leporis. The observations of this star on the 19th and 20th February, 1842, place it among the double stars, and assign 4.5 magnitudes to each. Though not too far south to have been observed by them, I do not find it in the lists of Herschel, South, or Smyth.

No. 264. The magnitudes of 26 Aurigæ, in *each* of the two years during which it was observed, indicate variability from the 5th to the 6th degree of lustre. It is worthy of attention.

No. 279. 59 Orionis is double, its companion of the 7.8 magnitude. Capt. Smyth says 13th! Herschel and South 8½ or 9. I am satisfied the transit would not show so small a star, under the least illumination. Is the companion variable ?

No. 290. Tauri in the A. S. C.

No. 297. It is probable that κ Aurigæ changes from the 4th to the 5th magnitude.

No. 303. Not in the A. S. C.

No. 313. 51 (Hev.) Cephei of Nautical Almanac; not in the A. S. C.

No. 329. The finder was set for *x Puppis*, and the star is so recorded; but the right ascension is 5 seconds too little.

No. 333. Double; 5.6 and 8. One estimate assigns only the 9th magnitude to the companion; but that given is believed to be correct. Their distance is about 5½″. Struve says of them: "Major 5.4, subflava; minor 7.7, subcærulea. Distantiam et angulum lente deminui probabile dictum est in opere Herscheli II et Southii, p. 99."

No. 357. Although there are twenty-one observations of *δ Geminorum*, it was seen double only once, arising no doubt from the brilliancy of the principal object; the magnitude of the companion was then stated as 8th, coinciding nearly with Struve's (8.2.) Its distance is about 7″. All the observers agree in the purple color of small star, but differ respecting the bright one; Struve calling it yellowish, whilst the others pronounce it white.

No. 365. See magnitudes in 1842.

No. 370. n^1 *Puppis* is double and equal, a beautiful object to observe. Sir James South (*Philosophical Transactions*, 1826) says "7th and 7¼ magnitudes," but admits that the stars were neither well defined nor steady, which was hardly to have been expected in objects so near his southern horizon. His distance in 1825 was 9″.

No. 371. Once recorded double, but no doubt erroneously, since its companion is about ten times the distance (145″) of any coming within the limits which I adopted.

No. 393. 15 Argus of the Nautical Almanac.

No. 394. 16 Cancri, though a triple star, was seen double only, its components of equal magnitude, viz: 6.7. Struve has it: "Stella triplex inter omnes, maxime insignis, A = 5.0 B = 5.7 C — 5.5. Color in tribus est idem indubie flavus, at diversi tenoris. B enim est flavior quam A et C, at A flavior quam C." It was not seen triple by Herschel and South in 1822, they pronouncing A and B to be one, beautifully defined and round; but Capt Smith has obtained measures of all three objects, and says: "A 6, yellow; B 7, orange tinge; C 7½, yellowish;" coinciding precisely with Struve's colors, but utterly at variance in magnitudes. It is not surprising that the third star could not be detected, the distance from A to B being only 1″.2, whilst that from A to C is 5″. Capt. Smith concludes "that the two close stars perform a binary revolution in about sixty years, while the outer one accomplishes a grand orbital ellipse in 500 or 600 years."

No. 408. ϕ^2 Cancri is a close double star, the components of the 6.7 magnitude. Struve's magnitudes are 6.0 and 6.5, the latter white, and distance 4½″. Herschel and South consider them equal, and Capt. Smyth has them 6 and 6½, as Struve. Both stars are pale white.

No. 409. υ^1 Cancri is double; its companion estimated of the 8th magnitude, distant nearly 6″. The magnitude of Herschel and South is also 8; that of Struve is 7.1; and Capt. Smyth 7½.

No. 410. 30 Monocerotis *q* of the A. S. C. For one of the observations of this star, see foot note, page 202.

No. 414. The observations of 1839 have been rejected.

No. 417. 1044 A. S. C. There are six observations of this double, four of which make the brighter of the 6th, one of the 6.7 magnitude, and the other not noted. Of the estimates of the lesser object, there are two 7.8, two 7, and one 8. The adopted magnitudes are 6 and 7.8; distance 10½″. All the observers agree in the "yellowish" color of the bright star, but differ respecting that of the companion. Struve says "rubroflava," and adds, "colores sunt certi." Capt. Smyth asserts "rose tint," and Herschel and South "bluish."

No. 421. η Pixis Naut. of A. S. C.

No. 431. γ Pixis Naut. of A. S. C.

No. 443. Pixis Naut. of A. S. C.

No. 456. θ Pixis Naut. of A. S. C.

No. 458. λ Pixis Naut. of A. S. C.

No. 461. Probably variable, from 5th to 6th magnitude.

No. 479. 10 Sextantis of A. S. C.

No. 481. 11 Sextantis of A. S. C.

No. 484. The magnitudes of this star range from 6 to 7.8. In December, 1840, it was 7; February, 1841, 6th; December following, 7.8, which were the estimates in February, 1842, also.

No. 490. Recorded double on the 31st December, 1841, and the small star noted as 8th magnitude. Both other nights were unfavorable to distinct vision of minute stars.

No. 491. For the observation of this star, see foot note to page 313. Rümker (*Mittlere Oerter von* 12,000 *Fix-sternen*, &c.) has observed it seven times, and makes it of the 6.7 magnitude. His right ascension reduced to January 1, 1840, is 10*h*. 07*m*. 39*s*.858.

No. 504. 28 Sextantis of the A. S. C.

No. 512. 1 Hyd. & Crat. of the A. S. C.

No. 513. 2 Hyd. & Crat. of the A. S. C.

No. 514. Rümker has two observations of this star. His right ascension reduced to January 1, 1840, is 10*h*. 31*m*. 30*s*.519.

No. 518. 41 Leonis Minoris of the A. S. C.

No. 519. 35 Sextantis is double; the estimates of magnitude quite uniform with each other, viz: 6.7 and 7.8, which coincides very nearly with Struve's 6.1 and 7.2. Their distance is rather more than 6½″, and the colors positively marked; that of the bright star, yellow, of the smaller, blue. Capt. Smyth's magnitudes are 7 and 8; Herschel and South, 7 and 7½.

No. 528. Double. There were six observations of 54 Leonis in 1839, without the companion having been perceived. The magnitudes are uniform in all six. Three observations of 1841 are also in accordance, but make the brighter star a magnitude less than the antecedent records. The adopted magnitude is that of Piazzi for the principal object, and 7th for the small star, which agrees with Capt. Smith. They are distant from each other 6½″, of an ashy and not very dissimilar color.

No. 535. For observations of this star, see foot notes to page 329. It is not to be found in the B. A. C. Rümker has three observations of it, and the polar distance is reduced from his catalogue. His right ascension reduced to 1840 is 10*h*. 53*m*. 26*s*.015.

No. 540. For two of the observations of χ^2 Hydræ, see foot notes to pages 313 and 329.

No. 543. Probably variable at very short intervals. Of the seven observations, three estimates make it 6th magnitude, three 5th, and the other 5.6.

No. 549. Rümker has two observations of this star, making the right ascension, January 1, 1840, 11*h*. 09*m*. 59*s* 830.

No. 562. —Hyd. & Crat. in the A. S. C.

No. 563. 17 Hyd. & Crat. in the A. S. C. This is a double star, whose components are of the same magnitude, and distant about 10″. The magnitudes and colors of Capt. Smyth are—"A 5½, lucid white; and B 7, violet tint." The magnitude of the companion is at least one too small—my estimates agreeing throughout. Is it variable?

No. 564. 19 Hyd. & Crat. of the A. S. C.

No. 566. This is probably 3934 of the B. A. C.; and the magnitude of 1838 should be 6, in accordance with that catalogue. Not in the A. S. C.

No. 581. 1383 A. S. C. was intended to have been observed.

No. 602. For observations of this star, see foot notes, page 336.

No. 606. For observation of this star, see foot note, page 331.

No. 608. The estimates of magnitude are almost equally divided between 5 and 5.6.

No. 611. The magnitude of the A. S. C. is certainly too great. Is the star variable ?

No. 617. 19 Virginis of the A. S. C.

No. 628. Many efforts were made to separate this remarkable star by increase of power, diminution of aperture, and illumination, but all were unsuccessful.

No. 644. The estimated magnitudes of 36 Comæ during the three years of its observation afford conclusive evidence that it may be regarded variable in lustre from the 4.5 to 5.6 magnitude.

No. 651. Not in the B. A. C. The polar distance recorded at observation is 104° 04′; but it is probably erroneous.

No. 656. 1 Hydræ con. of the A. S. C.

No. 658. *v* Comæ Ber. of the A. S. C.

No. 660. *w* Comæ Ber. of the A. S. C.

No. 668. *γ* Hydræ con. of the A. S. C.

No. 675. *u* Hydræ con. of the A. S. C. Marked *variable* in that catalogue.

No. 683. *t* Centauri of the A. S. C.

No. 689. *g* Hydræ con. of the A. S. C.

No. 690. The observation of 1841 has been rejected from the mean.

No. 695. There are two observations of this as a double star, the magnitudes being 5th and 7th.

No. 696. The companion to *h* Centauri was only seen once; its magnitude was estimated as 8.9.

No 699. 4 Hydræ con. of the A. S. C.

No. 713. The magnitudes of 1840, 1841, and 1842, indicate variability from 4th to 6th in a period of about 60 days; but, its observation following immediately after that of Arcturus, it is not improbable that the eye was unable to appreciate the star.

No. 716. The magnitude has been taken from the B. A. C.

No. 721. — Bootis in the A. S. C.

No. 731. π Bootis is a splendid double star, whose components are somewhat less than 6″ from each other. The estimates for the respective magnitudes are—for the bright star 5, 5.6, 4, 4, 5, 4, and 5; and for the companion 6 7, 6, 6. 5.6, 5, 5 6, and 6—indicating variability in each. Piazzi's magnitude is 3.4 for the larger star, which Capt. Smyth has preserved. I am certain this is too great, my estimates of 1839 being that of the magnitude due to the united stars, as the *comes* had not then been detected. Messrs. Herschel and South say of them: "*Nearly equal;* large white; the small perhaps inclines to blue;" and Struve: "Major 4.9; minor 6.0 *egregie albæ.*" Marked contrasts in size as well as colors ! Are these latter variable like the former ?

No. 737. For three of the observations of 8 Libræ, see foot notes to pages 41 and 43.

No. 741. My attention was attracted to this star by the discordance between its observed right ascension and that of the moon-culminating list computed from the A. S. C., a discordance amounting to nearly three seconds of time! Subsequently, its duplex character was perceived. At a later period, a third minute star was seen close to the others, and a *fourth* is recorded on one occasion. The concluded magnitudes are 6, 7.8, and 9; a re-examination of the star made by Mr. S. C. Walker, at my request, with the great equatorial of the new observatory, having shown it triple only. Messrs. Herschel and South could perceive but two stars; Sir John afterwards (*Fifth Catalogue, Memoirs of the Astronomical Society*) saw the third, and classes it among those of the 15th magnitude! Capt. Smyth detected it in 1833; he also states it as excessively minute, (16th;) and though he says "it is no easy matter to get it even by occasional glimpses under equatorial clock motion and attentive gazing," it is probable his determinations were affected by variability or the vicinity of the stars to the horizon, for the reason given in the note (279) to 59 Orionis.

· No. 743. χ Centauri of the A. S. C.

No. 791. 3 Herculis of the A. S. C.

No. 795. β Scorpii is a coarse double star, whose *comes* is of the 5.6 magnitude, and distant about 13″ north. The colors are quite in contrast; β being white, and the small star bluish.

No. 796. For the observation of this star, see foot note to page 47, which read "No. 36, β^2 followed this star 0*s*.65," instead of 10*s*.65. The magnitude is taken from the B. A. C.

No. 801. See the magnitudes of 1842.

No. 806. For one of the observations of this star, see foot note to page 47. It is not in the A. S. C., and was recorded υ^2 Scorpii in 1839, but it cannot be the companion to ν.

No. 812. σ Scorpii is a double star, its companion distant 20″. The estimations of magnitudes are for the brighter uniformly 4, and 8.9, 9, and 10, for the smaller. 9 is most probably correct for the latter, though modern European observers say 10 and 9.10, owing possibly to its south declination.

No. 813. The observations of 1839 indicate variability in γ Herculis, which those of 1842 tend to confirm.

No. 815. This is g in the A. S. C. It was seen double at the only observation of it, and the *comes* estimated of the 7th magnitude, distant about 5″. Capt. Smyth says: "A 5, pale topaz yellow; B 7½, blue;" and Messrs. Herschel and South: "Pretty unequal; 8 and 9 magnitudes, north following beyond all doubt;" a discordance between the estimations of the brighter not easily reconcilable.

No. 823. I think it more than probable that 33 Herculis varies from the 6th to the 8th magnitude. See observations, 1841 and 1842.

No. 824. 24 Scorpii of the A. S. C.

No. 836. See magnitudes, 1841 and 1842.

No. 838. The magnitude is that of the B. A. C. Perceiving ι Herculis only as a star of the 5th magnitude on the 30th June, 1839, (from which it subsequently varied but little,) it was supposed that the roof prevented its being seen directly, and the magnitude entered in the proper column of the reduction to mean places, is that of the A. S. C. I find, however, that 19 Corona Borealis, 44 Persei, and 37 Comæ, respectively 9′, 15′, and 29′ nearer the zenith, were distinctly observed, thus leaving me in doubt. Is the star variable from the 3.4 to 6th.

No. 840. 32 Ophiuchi of the A. S. C.

No. 847. 29 Scorpii of the A. S. C.

No. 848. A Ophiuchi (36) was in the list of moon-culminations for 1839. Perceiving at the second observation that it was a double star, whose components had an appreciable difference of right ascension, I was impressed with the necessity of stating which of the objects had been noted at transit. This gave rise to the remarks relating to the double stars to be found in these notes. The equality of the two stars in size is surprisingly uniform throughout the observations, and the concluded lustre of each 5.6, being half a magnitude greater than the estimations of Messrs. Herschel & South. As this is a remarkable binary, or rather *multiple* system, I extract largely from Capt. Smyth's account of it. After showing the difficulty of properly locating stars in this vicinity, and stating the misarrangement by which it is artificially divided from 30 Scorpii, he goes on to say:

"Of the individuals first measured, A is 4½ and ruddy, B 6½ pale yellow, and C 7½ greyish; the latter being double, with a most minute *comes* near the *sf* vertical, whose existence Sir John Herschel first pointed out to me. It would appear that Piazzi did not see A divided, as his note evidently alludes to A and C. The principal star is thought to be variable, though I have always seen it as now registered.

"36 Ophiuchi is upwards of 12′ distant from 30 Scorpii, on an < =70°. As the parallax on wires so widely separated made the micrometer questionable, these results were obtained by the Lee circle:

Δ AR =13′ 11″.4	Δ Dec. =3′ 03″.63	Ep. 1831.57
=13′ 10″.6	=3′ 04″.41	1839.28

"M. Bessel first pointed out that 36 Ophiuchi and 30 Scorpii have a common proper motion, in these words (*Fundamenta Astronomiæ*, 30 Scorpii): 'Ex observationibus hæc proficiscitur differentia inter stellam hanc atque A Ophiuchi:

Flamsteedii	1690	+13′ 32″.4	+2′ 56″.0
Bradleii	1755	.. ..	+3′ 02″.7
Mayeri	1756	+13′ 13″.1	
Piazzi	1800	+13′ 07″.0	+3′ 04″.2

unde perspicuum fit, huic stellæ et illi duplici stellæ communem esse gravem motum." The movements of these stars through space have pretty nearly the same values; those for 36 Ophiuchi are

P	AR —0″.59	Dec. —1″.25
B	—0″.48	—1″.14

"And my own observations afford AR —0″.53 and Dec. —1″.23; so that while in itself a singular revolving binary system, it is accompanying another and a most distant object in an *annus magnus*, to contemplate the period of which makes the mind quail. This is a curious example of two stars transferred, by a progressive uniform motion, common *to both*, in a curve so vast as to appear a straight line, towards some unknown region, or, as Mr. Baily expresses it, 'journeying through space, and leaving the neighboring stars behind.' In the present state of human knowledge, it is impossible to ascertain whether this is a real motion arising from gravitation, or an apparent one owing to the actual progression of the solar system towards some pre-ordained point in the heavens, between which and us they lie; at all events, such a march indicates that these stars cannot be only optically or accidently connected."

No. 849. Four estimates assign 6th magnitude to the companion of α Herculis, and three 6.7. Struve says of it: "Major 3 egregie flava, minor 6.1 intense cærulea, colores insignis;" in which colors Capt. Smyth, and, so far as the small star is concerned, Herschel and South, coincide. They regard the principal object *ruddy*, and the distance of the two 5½″. It has certainly appeared to me more ruddy than yellow. Struve farther remarks: "Notum est lumen α Herculis esse variabile. Quæ variatio utrum majore pertineat stellæ an minori, est examinandum. Suspicor minorem esse variabilem cujus splendor diversis temporibus intra magnitudines 5 et 7 sit notatus. In postremae observationis autographo expresse dictum est comitem certe non esse minorem magnitudine quinta." The brighter star was frequently considered very faint for the 3½ magnitude during the observations, without any knowledge that it had been regarded by the elder Herschel as changing from the 3d to the 4th in about sixty days; but as it was one of the stardards of comparison, I did not feel at liberty to deviate from the magnitudes of the Nautical Almanac.

No. 857. — Scorpii in the A. S. C.

No. 858. 33 Scorpii in the A. S. C.

No. 883. Once noted double, and once noted triple; the other two observations make no mention of a companion, and its great southern declination probably excluded it from the lists of the European observers mentioned.

No. 893. Probably variable.

No. 896. Six out of seven odservations assign the 6.7 magnitude to the companion of 70 Ophiuchi, being nearly a mean between the estimations of Struve and Capt. Smyth. Both these observers agree that the colors are yellow and violet or purple, respectively. These stars constitute one of the *binary systems* whose orbit has received great attention from astrometers, they having completed a revolution, or nearly so, since the peried of their first measurement by Sir William Herschel.

No. 902. — Clypei Sob. in the A. S. C.

No. 904. — Clypei Sob. in the A. S. C.

No. 909. 107 Herculis probably varies from the 5th to the 6th magnitude.

No. 912. The magnitude of the companion to 59 Serpentis probably prevented its being seen during the observations of 1840. The only estimate makes it 9th, and distant about 4″; coinciding with the conclusions of Messrs. Herschel and South as to the magnitudes of each, but a magnitude *smaller* than Capt. Smyth in the lesser, and a half magnitude in the brighter star. The former observers state that the plane of rotation of one of these stars about the other passes nearly through the eye, the smaller one having been at its greatest elongation in 1802; the inference from which is, that one will occult the other, which the difference of their colors (white and blue) and rapidity of motion will render a most curious phenomenon. More recent observations, however, have determined the error of these conclusions, and γ Virginis remains the only instance of a sidereal occultation that has been witnessed.

No. 918. *q* Clypei Sob. of the A. S. C.

No. 920. — Clypei Sob. in the catalogue for 1841.

No. 924. — Clypei Sob. in the A. S. C.

No. 949. Although observed by Bradley and Airy, (Greenwich, 1838,) the magnitude has not been recorded.

No. 957. 20 Aquilæ undoubtedly varies from the 5th to the 6th magnitude.

No. 960. 1 Sagittæ of the A. S C.

No. 980. A beautiful blue star, the companion to β Cygni, and classed among the duplex by astronomers; but its distance (34″) places it beyond my list. My estimate of the smaller is half a magnitude greater than that of Messrs. Herschel and South, and 2½ greater than Capt. Smyth, whose observations were made in 1830 and 1837. He says: "A 3 topaz yellow, B 7 sapphire blue—the colors in brilliant contrast; by which I do not mean the mere optical complementary tints, but relating to the bodies as radiating their own colored lights." My remembrance of this star is most vivid, although there is but *one record* of it; yet, it being in the field with β, and commanding attention by its remarkable color, I am confident that it *never* appeared to me smaller than a star of the 5th magnitude.

No. 983. The change of magnitude indicated in the observations of 1840 is not confirmed by those of 1841 and 1842.

No. 988. See magnitudes.

No. 1000. δ Aquilæ being one of my standards, I have put down its magnitude as I find it in the catalogues, but I *rarely ever saw it greater than the 4th magnitude;* indeed, to the eye it is notably inferior to γ. If it be variable, which seems to be the case from the following remark of Capt. Smyth, the change is small and at long intervals. He says: "By several direct comparisons in 1834 and 1836, I can pronounce that it is now (1836.74) actually brighter than β, which of course was not formerly the case."

No 1026. Eight observations of κ Cephei assign it the 4 5 magnitude, and its companion ranges from 7 to 9.10, the mean of all being 8.9; coinciding exactly with Capt. Smyth. Struve's magnitudes, colors, and distance, are as follows: "Major 4.0 albaviridis; minor 8.0

cærulea; dist. 7″.37." My attention was attracted to this star by the difference between the observed and computed places, which subsequent examination proved to be principally due to an error or omission in the A. S. C.; the sign of the precession should read —1s.882, instead of +1s.882.

No. 1030. λ Ursæ Minoris of the Nautical Almanac; not in the A. S. C.

No. 1058. 32 Vulpeculæ probably varies in brightness from 4.5 to 5.6.

No. 1063. 1 Equulei, though really *triple*, was only seen double, its components shown by my transit being of the 5.6 and 7.8 lustre. Struve says of it: "Anno demum 1835 vidi majorem ipsam esse ex vicinissimis compositam. Itaque est triplex A 5.7, B 6.2 subflavæ, C. 7.1 albacinerea." And Capt. Smyth: "This was entered as the double star 21 ♅ III, and described by Piazzi, 'Duplex. Comes 0″.7 temporis sequitur fere in eodem parallelo.' Under this impression, the measures before me were:

♅ ....Pos. 84° 21′ Dist. 9″.37 Ep. 1780.59
H and S......... 79° 21′ 12″.37 1823.58

I also, therefore, measured it as double in 1833, without noticing the elongation of A. But on receiving Professor Struve's great catalogue, and perceiving that he made the object to be triple, I attacked it again, with the above success." His distance from A to B is 0″.5! No wonder that my transit with power 80 did not separate it!

No. 1065. The magnitude of this star is taken from the B. A. C.

No. 1071. 2 Equulei is double, the magnitude of its companion being at the observations 6.7 and 7. The stars are equal. This is the only instance in which my estimates of magnitude exceed Struve's, and probably confirm his remark: "Major 7.1 *altera;* 7.1 paulo minor, egregie albæ. Distantiam 2″.58."

No. 1072. A comes of the 9.10 magnitude was seen to η Capricorni on the 23d and 24th October, 1841.

No. 1080. For the observation of this star, see foot note to page 345.

No. 1083. I have no doubt of the variability of this star.

No. 1086. — Aquarii in the A. S. C.

No. 1097. A coarse double star, whose colors are quite in contrast. The mean of all the estimations of the magnitude of the smaller star is 8.9, half a magnitude less than Capt. Smyth, but in accordance with Messrs. Herschel and South.

No. 1110. The observations of 1838 have been rejected.

No. 1111. 11 Pegasi in the A. S. C.

No. 1126. 29 Aquarii was seen double at two of the three observations, and the magnitudes considered equal at each. When observed in 1840, A was considered as 6th, which is the magnitude given it by Capt. Smyth. I strongly suspect the permanence of its lustre.

No. 1131. 37 Aquarii probably varies from the 6th to the 7th magnitude.

No. 1133. φ Piscis Australis of the A. S. C.

No. 1136. 41 Aquarii is twice recorded double, but the magnitude of its companion is only once noted as 8th, which is greater than Capt. Smyth by half, and than Messrs. Herschel and South's whole magnitude. The colors are in brilliant contrast, and the distance of the objects about 5″.

No. 1152. A binary system according to Capt. Smyth, which Struve also regarded as probable, from the following remark: "Distantiam diminui probabile est, quod etiam convenit cum aucta, ut videtur, velocitate angulari." The magnitudes of the former astrometer are 4 and 4½; of the latter, 4.0 and 4.1; whilst my estimations of the larger are 5, 5, 4.5, 4.5, 4.5; and of the smaller, 5; and all the rest, 6. Are they variable?

No. 1158. See magnitudes, 1840.

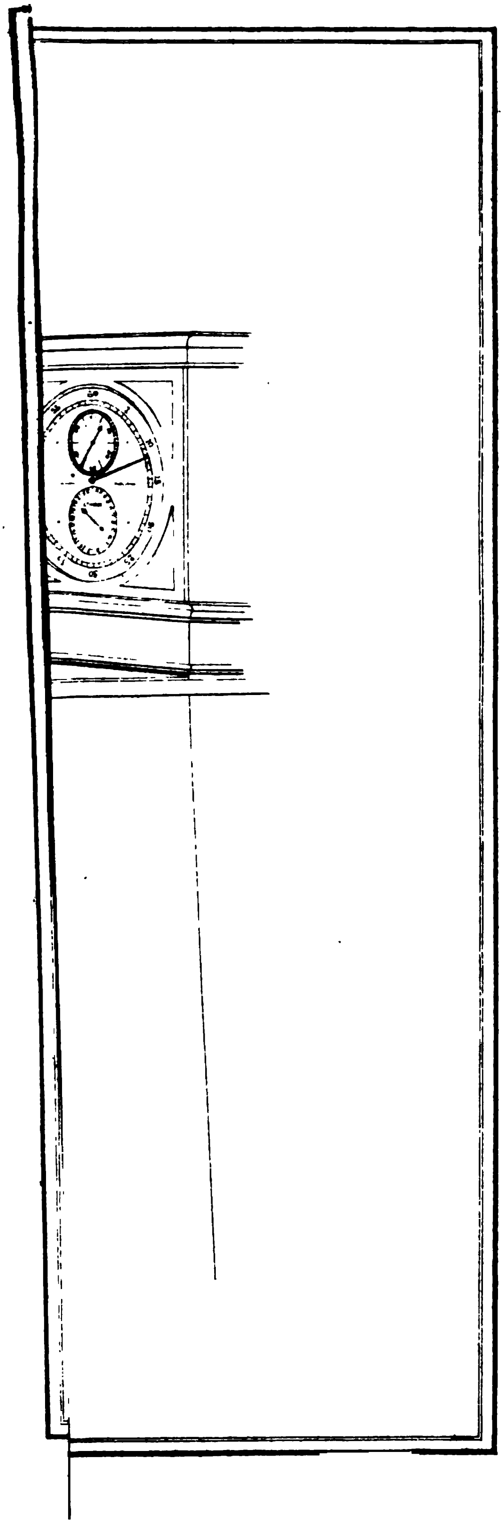
No. 1172. I have no doubt of the variability of this star from the 4.5 to the 6th magnitude.

No. 1203. See magnitudes, 1841.

No. 1205. At the only observation of 99 Aquarii, a comes of the 8.9 magnitude was seen.

No. 1225. There are two observations of 107 Aquarii double; the smaller star being estimated of the 7th magnitude, and distant some 6″. Capt. Smyth says: "A 6, bright white; B 7½, blue;" and Piazzi: "Comes 7.8œ magnitudinis sequitur 0″.1 temporis, 3″ circiter ad austram."

No. 1242. The observations afford satisfactory evidence of the variability of 29 Piscium from the 5th to the 6th magnitude.



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